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AUG. COTTON 1941

SERVING THE Textile Industries

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"You must go to the hospital. . . . . but don't worry"

When the Doctor Says This to Your Employee, What Answer is Likely?

That depends, of course, upon what reserves Employee has to meet the fast mounting extra bills disability brings.

IT COSTS THREE TIMES AS MUCH TO BE DISABLED AS TO BE WELL

Many hundreds of Employers have greatly helped in solving this problem for their Employees through Provident HUMAN SECURITY Plans that provide for such emergencies, and others shown in the accompanying outline.

Without cost to Employers, other than permitting premium deductions over payrolls, such a HUMAN SECURITY Plan can help Employees meet the extra expenses caused by →

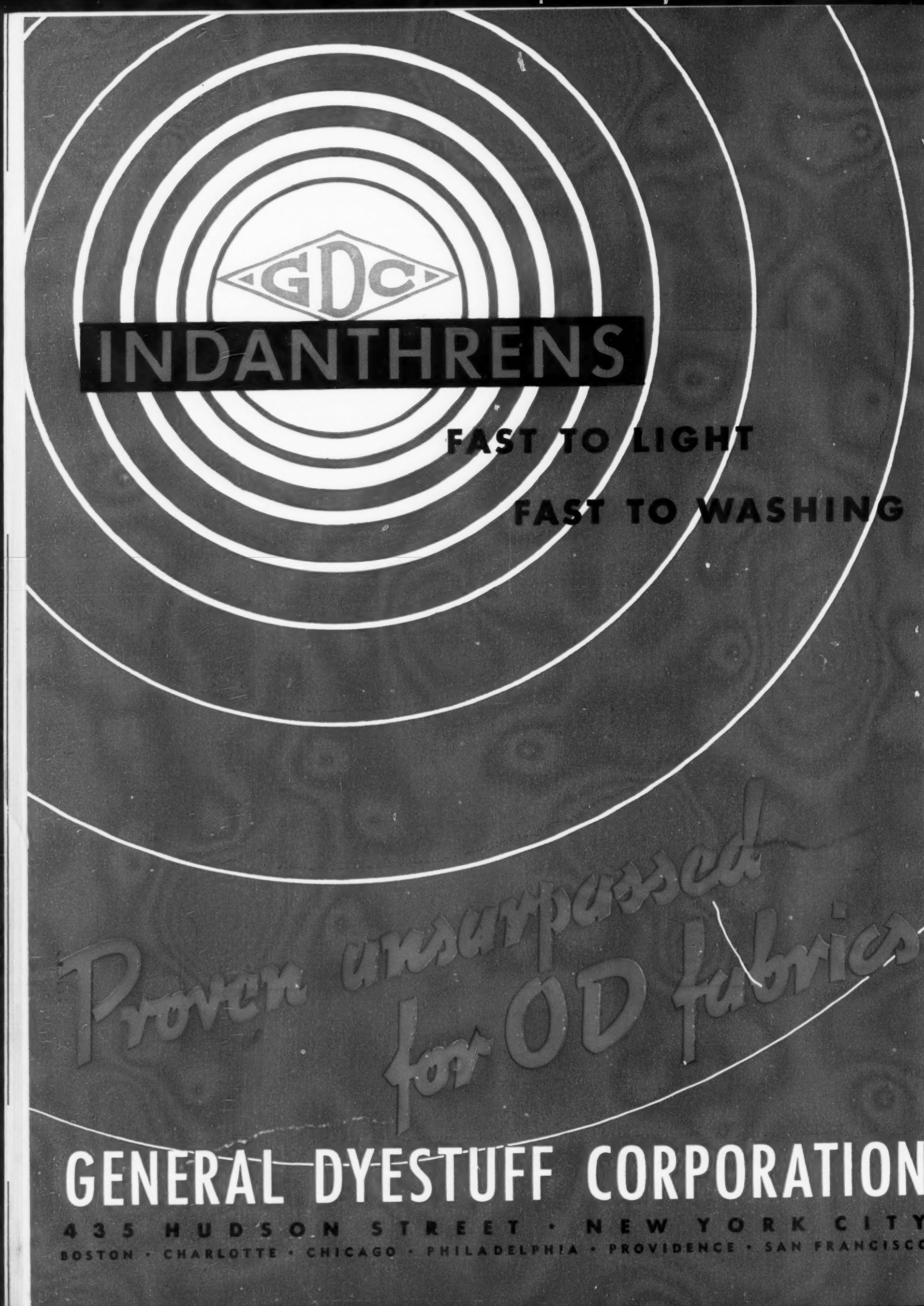
HUMAN SECURITY

- Death in family
- Loss of time due to Sickness or Accident
- Hospitalization or operation when necessary
- Aiding dependents upon death of employee
- Maternity benefits

EMERGENCY INCOME

PROVIDENT
LIFE AND ACCIDENT
INSURANCE COMPANY
CHATTANOOGA — SINCE 1887 — TENNESSEE

• Specialists in HUMAN SECURITY (Emergency Income) Plans for Over a Half-Century •


GDC
INDANTHRENS
FAST TO LIGHT
FAST TO WASHING
Proven unsurpassed for OD fabrics
GENERAL DYESTUFF CORPORATION
435 HUDSON STREET • NEW YORK CITY
BOSTON • CHARLOTTE • CHICAGO • PHILADELPHIA • PROVIDENCE • SAN FRANCISCO

Draper Corporation Makes in Excess of

85% of All Shuttles

For Draper Looms and a Substantial Percentage of Shuttles for Other Automatic Looms

Draper Knowledge of the Exacting Conditions of Weaving Hundreds of Different Fabrics on our Various Loom Models and Constant Draper Research to Meet New Conditions as they Arise brought us this Commanding Lead in the Shuttle Business

Spring Breakage Largely Eliminated

We introduced Our Shuttle Spring Rubber two years ago. It has Enormously Reduced and Almost Eliminated the long-standing Complaint of Spring Breakage besides proving a great aid in Keeping the Bobbin Pointing True and Reducing Bobbin Vibration

This is a good example of the Results of Draper Research in Solving Weaving Problems that come up from day to day in Mills we serve

Draper Shuttles Are Backed by Draper Research

That Makes them the Best You Can Buy—Best for your Looms—Best for the Fabrics you Weave

DRAPER CORPORATION

Atlanta Georgia Hopedale Massachusetts Spartanburg S C

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Volume 105. Number 8.

UNIFORM LOOPS!

YOUR KNITTING needles free from rust despite wetted yarn, uniform loops course after course, fewer seconds, faster scouring: These are the assured results of protecting your needles with *Texaco White Needle Oil B.*

Texaco White Needle Oil B is highly resistant to oxidation and staining. It assures smoother machine operation and prevents stock spoilage. Scouring of gray goods is easier, faster.

The outstanding performance that has made Texaco preferred in the fields listed in the panel has made it preferred also by prominent textile mills throughout the country.

These Texaco users enjoy many benefits that can also be yours. A Texaco Lubrication Engineer will gladly cooperate . . . just phone the nearest of more than 2300 Texaco distributing plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York, N. Y.

THEY PREFER TEXACO

★ More locomotives and cars in the U. S. are lubricated with Texaco than with any other brand.

★ More revenue airline miles in the U. S. are flown with Texaco than with any other brand.

★ More buses, more bus lines and more bus-miles are lubricated with Texaco than with any other brand.

★ More stationary Diesel horsepower in the U. S. is lubricated with Texaco than with any other brand.

★ More Diesel horsepower on streamlined trains in the U. S. is lubricated with Texaco than with all other brands combined.

TUNE IN: "Treasury Hour—Millions for Defense." All-Star Radio Program. Every Wednesday Night, CBS. 9:00 E.D.T., 8:00 E.S.T.; 8:00 C.D.T., 7:00 C.S.T.; 6:00 M.S.T.; 5:00 P.S.T.

TEXACO

REG T M.

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

FIRST THINGS FIRST!

Despite full-time operation and new highs in Westvaco plant efficiency, at times we find it difficult to keep up with the mounting demand for certain items in our line.

So "for the duration," we're doing first things *first*—taking care of national defense needs, then meeting the needs of our customers as fairly as possible.

While we may not always be able to accept an order in the quantity required or live up to our reputation for extra-prompt shipment, we are at this time particularly anxious to render technical service that may help you to use Warner Chemicals with the greatest possible efficiency.

WARNER CHEMICAL COMPANY

Division of

WESTVACO CHLORINE PRODUCTS CORPORATION

Chrysler Building, New York City
Woodside Building, Greenville, S. C.

CUTS COSTS 1/3 ON TWISTER DRIVES!

THERE'S no profit in shutdowns—as a large North Carolina textile mill discovered. Double construction belts were giving this plant more than its share of trouble on its twister drives. Heavy starting loads, combined with a severe moisture condition, caused excessive stretch and slip, made take-ups frequent. So frequent that production was being hampered.

Then, nearly four years ago, the G. T. M.—Goodyear Technical Man—was called in. Upon his specification a Goodyear 5-ply Thor (seamless) Belt was installed. Slip and stretch were virtually eliminated; output increased accordingly. And—at a cost two-thirds that of its predecessor, this belt is still giving fine service. That's why this mill now has ten twister drives equipped with Thor Belts!

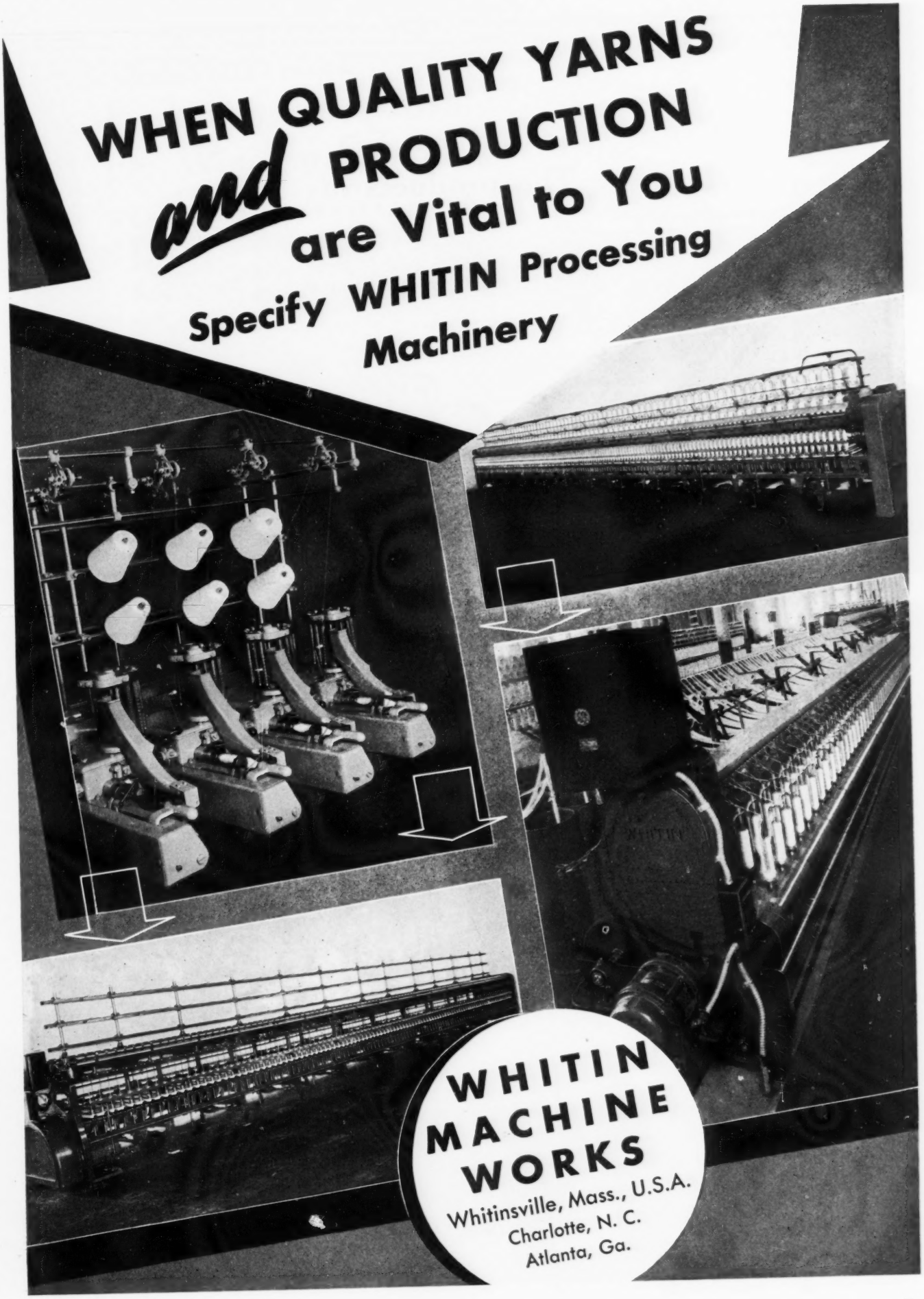
There is a record you can't afford to overlook when considering belting for your drives. The G. T. M. will be happy to point out the advantages of Thor Belts to you. To summon him, write Goodyear, Akron, Ohio, or Los Angeles, California—or phone the nearest Goodyear Mechanical Rubber Goods Distributor.

THE GREATEST NAME IN RUBBER
GOODYEAR

Thor—T. M. The Goodyear Tire & Rubber Company

WHEN QUALITY YARNS *and* PRODUCTION are Vital to You

Specify WHITIN Processing Machinery

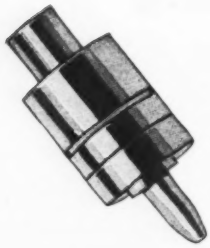


WHITIN MACHINE WORKS

Whitinsville, Mass., U.S.A.
Charlotte, N. C.
Atlanta, Ga.

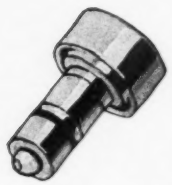
The products of

New Departure

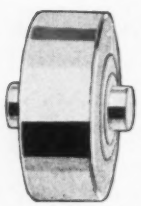


are *Ideas*

as well as



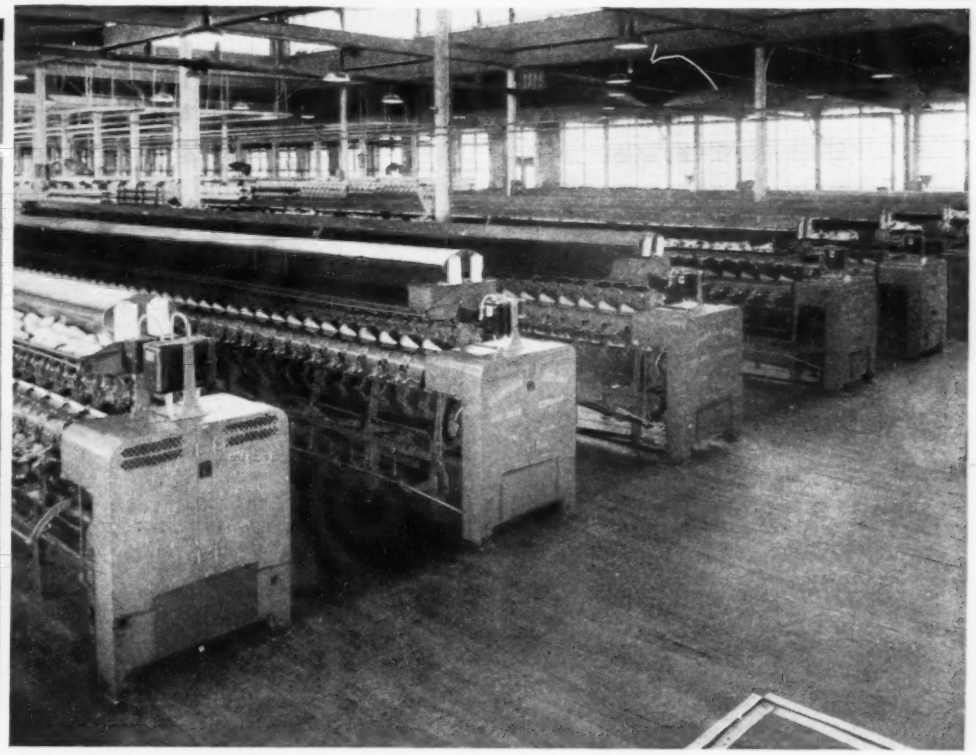
Bearings



New Departure, Division of General Motors, Bristol, Connecticut

Nothing Rolls Like a Ball

Production Jumps from 27.1 lbs. to 76.1 lbs. per Winding Spindle per 80 Hour Week at Central Mills — 6 OTHER GAINS LISTED BELOW



Central Mills of Sylacauga, Ala., one of the Avondale Mills group, recently replaced all old Model 30 machines with 8 Model 102 Foster Winders, 100 spindles each, 6-inch traverse for winding knitting cones and dye packages.

In addition to an increase in production of 180.8 per cent, Mr. E. L. Epperson also reports the following advantages (see p. 83 Textile World, May, 1941):

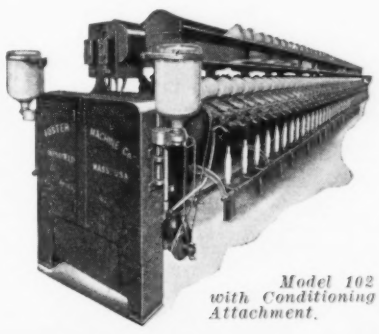
BETTER WINDING: i. e., more uniform diameter, taper, and lay, and almost complete absence of overshot and undershot cones.

NEGLIGIBLE REWINDING due to improved performance.

BETTER YARN because of tandem blade and comb slub catchers.

35% SAVING IN FLOOR SPACE, while increased alley space permits free movement of operatives.

58% SAVING IN POWER.



Model 102 with Conditioning Attachment.

Each machine is equipped with 2 Westinghouse 2-h.p., 550-volt, 60-cycle motors.

IMPORTANT LABOR SAVING is another advantage of the Model 102, largely due to a self-threading feature on tensions and drop wires which permits quicker piecing-up.

Investigate what the Model 102 Winder can do for you. Send for Bulletin A-91.

FOSTER MACHINE CO.
WESTFIELD, MASS.
Southern Office:
Johnston Bldg., Charlotte, N. C.

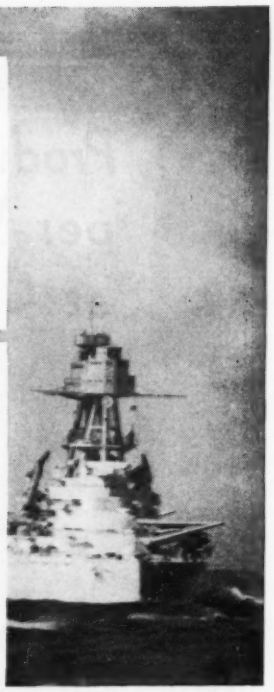
FOSTER MODEL 102

FOR WINDING COTTON, MERCERIZED, WOOLEN, WORSTED, MERINO, SPUN SILK AND SPUN RAYON YARNS

DEFENSE LOADS on power units and machinery demand non-failing lubrication. For requirements of *TEXTILE MACHINERY* there are . . .

. . . SINCLAIR LILY WHITE OILS and NO-DRIP LUBRICANTS in adequate viscosities and consistencies for all speeds or loads on spindles, top rolls, and comb boxes. For details about these or *Knitting Machinery* oils write nearest Sinclair Office or Sinclair Refining Company, 630 Fifth Ave., New York, N. Y.

Write for "The Service Factor"—a free publication devoted to the solution of lubricating problems.



WEAVING ROOM, *Texas Textile Mills, Dallas. This and Waco and McKinney Mills use Sinclair lubricants.*

SINCLAIR TEXTILE LUBRICANTS

SINCLAIR REFINING COMPANY (Inc.)

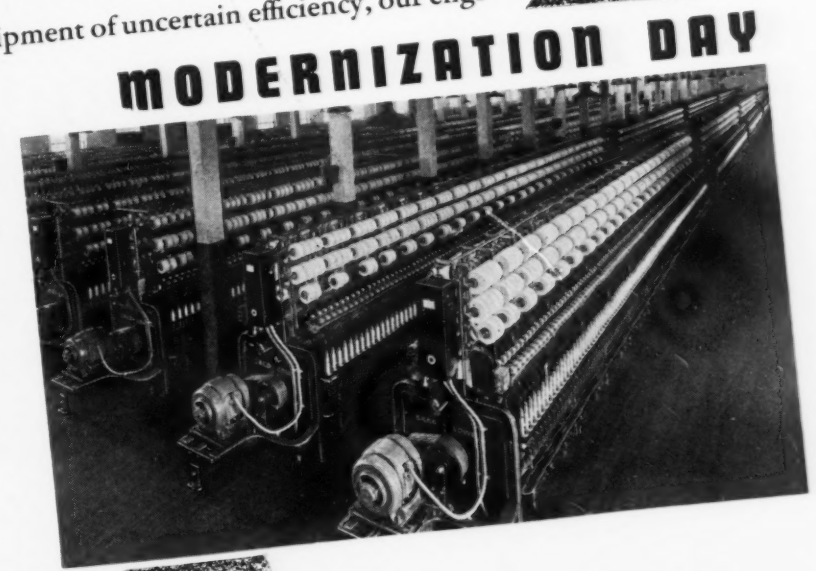
2540 West Cermak Road, Chicago • 10 West 51st Street, New York City • 1907 Grand Avenue, Kansas City • 573 West Peachtree Street, Atlanta • Fair Building, Ft. Worth

Another M*-DAY *to meet* PRICE CONTROL

M-Day might well be adopted by the textile industry as the symbol for modernization-day . . . modernization for the defense of profits and sales in a period of Controlled Prices. Since profit margins will be "based on what the *average* mill can do" . . . it is imperative that mills who would hold their present profitable position, eliminate equipment which is obsolete, inefficient, or costly to operate and maintain.

Mills operating Saco-Lowell Controlled Draft Units in Drawing, Roving and Spinning are prepared to meet such unexpected emergencies without serious disturbance or danger to their earnings and capital-safety. Having maintained a policy of modernization, these mills are now in a strong position to meet the problem of price control with production control.

If you are now operating equipment of uncertain efficiency, our engineers will show how a modernization program at this time can be made a sound and profitable investment.



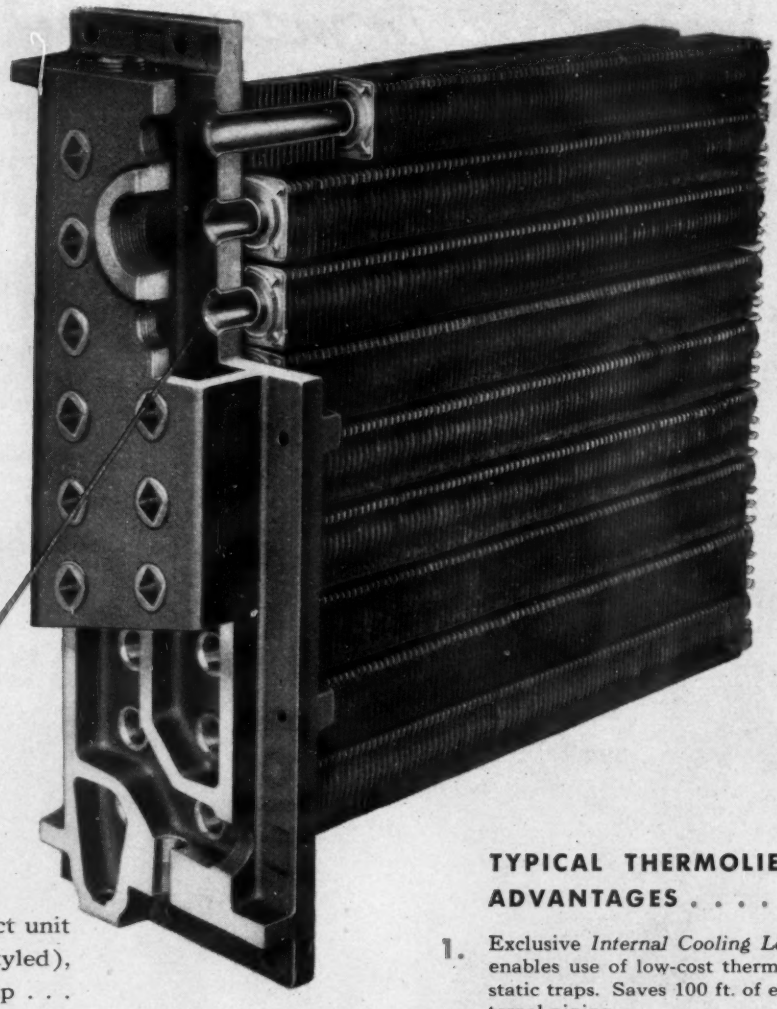
SACO-LOWELL SHOPS

60 BATTERYMARCH ST. BOSTON, MASS.

Charlotte, No. Carolina Greenville, So. Carolina Atlanta, Georgia

* This advertisement appeared in August 1940 . . . a forerunner which did not pass unnoticed, but was heeded by many manufacturers. Time has proved that the message was sound advice.

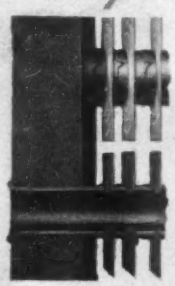
LOOK "INSIDE" WHEN YOU SELECT UNIT HEATERS, TOO!



YOU'RE buying HEAT not ornaments, when you select unit heaters – so forget the housings (they're all smartly styled), and *look inside*. That's where the differences show up . . . vital differences in performance under *actual working* conditions, as opposed to standard rating tests under *ideal* conditions.

We have "opened up" a Thermolier for your inspection and comparison. You'll find here an efficient "heating machine", not just another heater! Its design and construction reflect over 50 years' experience by Grinnell engineers in solving heating problems. Send for complete Data Book explaining all features of Thermoliers. Grinnell Company, Inc., Executive Offices, Providence, R. I. Branch offices in principal cities.

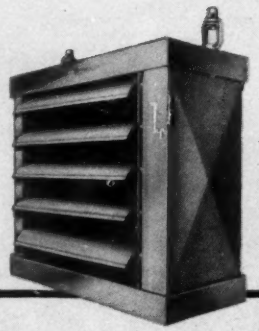
"BOILER-TUBE" JOINTS



Typical of the superior construction of Thermoliers is the leakproof tube-to-header construction. Every tube end is expanded into the header like the tubes of heavy duty condensers and heat exchangers. Ask any heating engineer about advantages of this construction. Over 500,000 of these joints are now in use – not one has failed under the working conditions for which it was intended.

TYPICAL THERMOLIER ADVANTAGES . . . . .

1. Exclusive *Internal Cooling Leg* enables use of low-cost thermostatic traps. Saves 100 ft. of external piping.
2. *U-Shaped Tubes* eliminate expansion strains the simplest way . . . insure dependability.
3. Positive *Built-In Drainage* – every tube is pitched for complete drainage of condensate.
4. *Superior Fin Design* – square fins instead of round . . . 24% more radiating surface. Patented collars need no solder for strength. Dirt and lint collection is reduced to a minimum.



GRINNELL
THERMOLIER
THE UNIT HEATER WITH 14 POINTS OF SUPERIORITY

THIS IS NO. 28 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

NEW TRAVERSE BAR LEVER WITH REPLACEABLE LOCKING POINT (No. 90 Winder)

In order to increase the life of the No. 90 Traverse Bar Lever and also to save the mill the trouble of periodically replacing the complete lever, a new design has been developed.

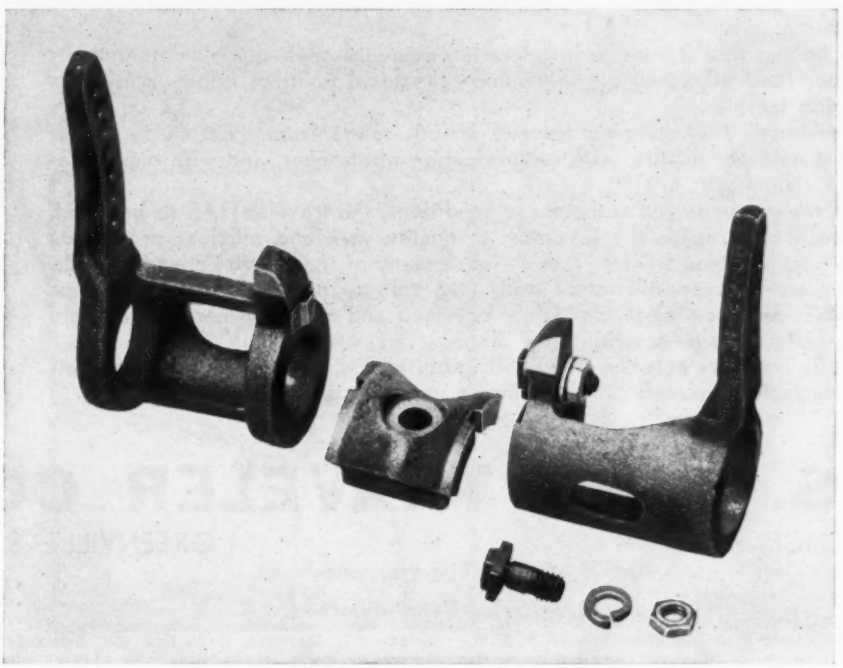
The Lever Lock now has a hardened steel point which, in many cases, has more than doubled the period between replacements. Since this new Locking Point is *replaceable,* it is no longer necessary to remove the rocker shaft from the winder when making a replacement.

It will be necessary to install a new Lever (90-62-16x) in order to get the advantage of the replaceable Locking Point. Once the new Lever is installed, the Locking Point can be quickly replaced at small cost and without interfering with production.

This Locking Point is made with a 15° angle in order to provide a more positive drive at high speeds. When Lever 90-62-16x takes the place of 90-62-12, the Drivers need not be changed.

An older style Lever 90-62 is made with a 25° angle. When it is replaced with the new Lever, it will also be necessary to install Driver 90-63-5 in order to have the same 15° angle on both the Locking Point and the slot in the Driver.

When making the change in one machine, 20 Levers and 10 Drivers are required. Old parts removed from the machine can be used for replacement on other winders in the room.



Left — old-style Traverse Bar Lever 90-62-12. Center — Driver 90-63-5. Right — new Traverse Bar Lever 90-62-16x with replaceable Locking Point, also shown in foreground.

WINDING 2 ENDS AT ONCE ONTO FILLING BOBBIN (No. 90 Winder)

Some mills have attempted to wind two ends of yarn from two supply packages onto a single loom bobbin, using individual tension control for each end.

This has been found to be generally unsatisfactory, due to the different diameters at which the yarn goes into the bobbin. When taking the yarn off the bobbin, one end will always be tighter than the other, and a loop will form in the slack end.

It is recommended that the two ends of yarn be wound into cones or tubes on the doubler. From such packages, the yarn can be taken through a single tension on the No. 90 winder.

If a slight amount of twist in the two ends is not objectionable, the yarn can be delivered over the end of cones. If no twist is desired, tubes can be wound for an unrolling supply.

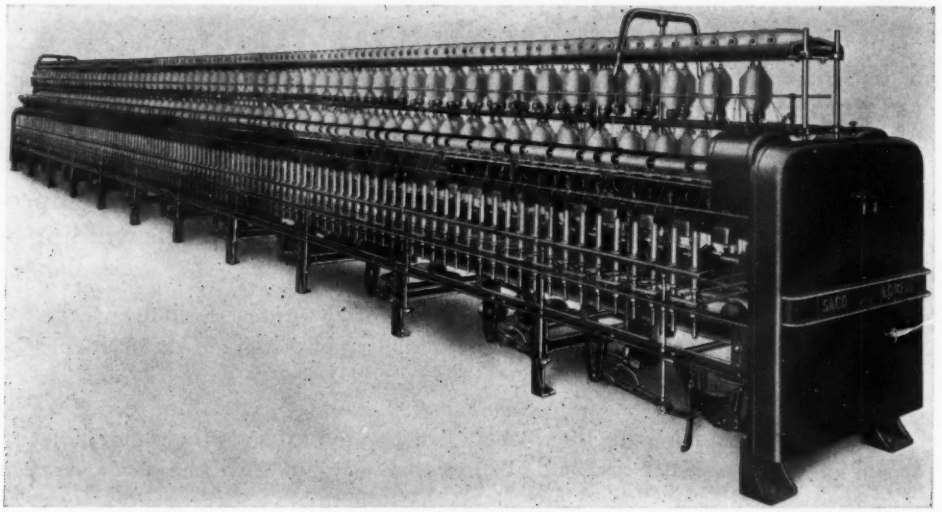
See our General Catalog in TEXTILE YEARBOOK

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

*Reg. U. S. Pat. Off.



At a Mile-a-Minute

Sealed metal containers guarantee that your U. S. Travelers will reach you in perfect condition, with no tampering or loss in count.

Manufacturers of textile machinery have spent painstaking years in developing up-to-date equipment so that the mills may keep abreast of the times and constantly increase their efficiency.

This is particularly true of manufacturers of spinning and twisting frames, all of whom have been working to design improvements in their equipment so that the mill may obtain the utmost in yarn quality at the lowest possible operating cost.

In buying new frames or in operating your old ones, don't unintentionally hamper their efficiency by neglecting "the focal point of good yarns" . . . the ring traveler.

Remember that spinning traveler speeds range from 3500 ft. to better than a mile per minute, with no lubrication whatsoever, and with only occasional cleaning.

At these speeds and under these conditions, the traveler HAS to be good, if you are to realize the maximum in quality yarn and efficient production from your spinning frames. That's why so many of the country's leading mills, regardless of type of frame used, rely entirely on U. S. Ring Travelers. Durable, precision-made, delicately balanced and rigidly inspected, they are accurately uniform in weight and shape.

U. S. Travelers actually cost LESS because they last longer and wear better, through their useful life, and insure smoother production.

U. S. RING TRAVELER CO.

PROVIDENCE, R. I. GREENVILLE, S. C.

AMOS M. BOWEN, Pres. and Treas.

Southern Sales Representatives:

William P. Vaughan, P. O. Box 792, Greenville, S. C.
William H. Rose, P. O. Box 792, Greenville, S. C.
Torrence L. Maynard, P. O. Box 456, Belmont, N. C.
Oliver B. Land, P. O. Box 158, Athens, Georgia

UNIVERSAL RING

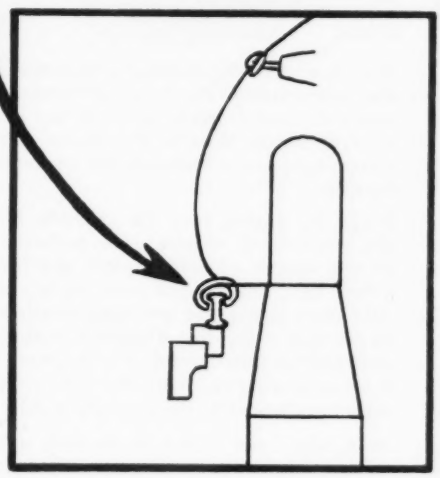
BOWEN ROUND POINT TRAVELERS
BOWEN SQUARE POINT TRAVELERS
BOWEN IMPROVED VERTICAL BRONZE
BOWEN PATENTED BEVEL EDGE

BOWEN PATENTED NE-BOW VERTICAL
BOWEN PATENTED VERTICAL OFFSET
BOWEN FLAT OVAL AND ROUND WIRE TRAVELERS

the Traveler has to be GOOD!

The Bowen Patented Bevel Edge feature of U. S. Ring Travelers produces ideally smooth, even yarn; there are no angular edges to flatten the end . . . no split ends in throwing rayon and silk . . . no fly-waste in the spinning and twisting of cotton, wool, worsted, asbestos and kindred fibres. Made and stocked in all sizes and weights, for all kinds and counts of yarns.

The Focal Point of GOOD YARN



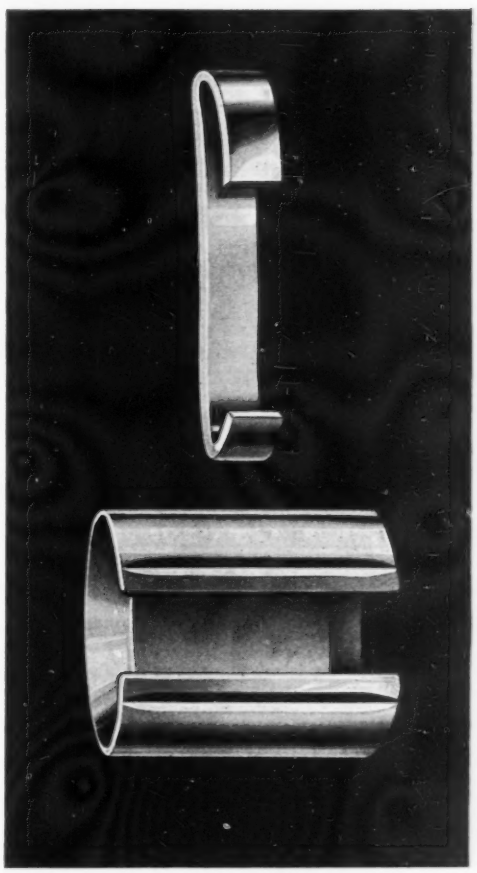
NE-BOW PATENTED VERTICAL RING TRAVELERS . . . Developed to meet the particular needs of the silk and rayon trade in the process of throwing. By eliminating pivoting action, traveler is constantly kept in close contact with lubricating device and assists in distributing the lubricant evenly over the entire inner surface of ring, prolonging life of both ring and traveler and promoting more even twist.

BOWEN PATENTED VERTICAL OFFSET TRAVELERS . . . Particularly valuable in twisting of cords and plys. Based on mechanical principle of taking a diagonal position with relation to the ring, presenting a bearing surface over the full width of traveler. Prevents gripping or binding, gives even tension and evener product, and longer life to the traveler.

Samples for your exact requirements submitted upon request. Write direct, or contact your nearest representative.

U.S. RING TRAVELER CO.

"A Traveler for Every Fibre"



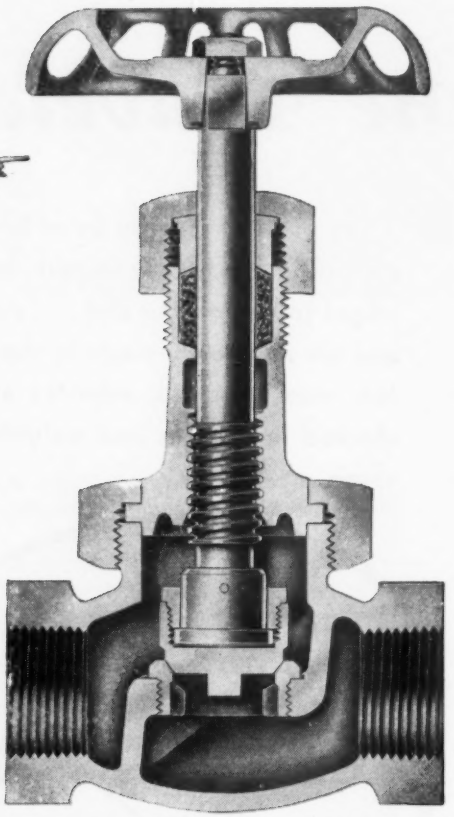
The Bowen Patented Bevel Edge Travelers

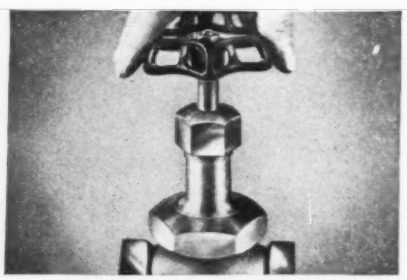
STANDARD TRAVELERS

Yes..there is a difference

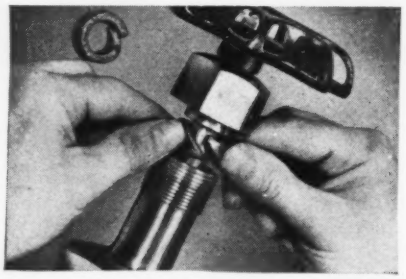
in regrinding valves!

Check over the extra convenience and service features you get in this Bevel Seat type Regrind-Renew Valve— JENKINS FIG. 970

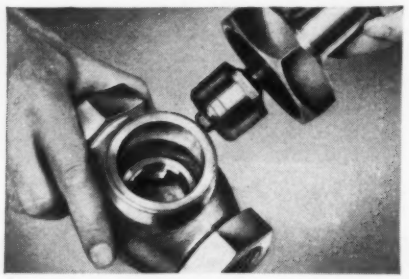




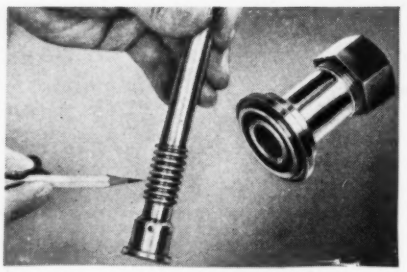
1 Start with the perfect grip, non-heat handwheel. The ingenious deep scallop design affords a firm grip even for greasy hands. Trimming of this valve is interchangeable in globe or angle bodies, screwed or flanged.



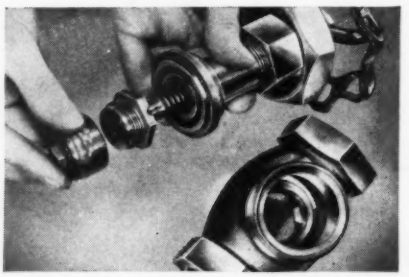
2 Notice how easily the valve can be repacked. Loosen the hexagonal packing nut, slide the packing gland up and new high pressure asbestos packing can be readily inserted.



3 Bonnet and trimming are removed simply by loosening the husky union bonnet ring. Spindle has a hole drilled for pin insertion to simplify regrinding operation, with the spindle serving as a regrinding tool.



4 Look at those perfectly machined spindle threads that afford full engagement with the bonnet. Also the beveled shoulder that seats firmly in champered surface of the bonnet to permit repacking under full pressure.



5 See how easily the nickel alloy disc can be renewed. It screws over the disc lock nut and is held securely by a lock-washer with bent-over flanges. Beveled seating surfaces of the disc and renewable nickel alloy seat ring remain constant no matter how often they are reground.

Here is a valve that welcomes your most critical examination. In these illustrations we practically turn it inside out to show you how it is especially suitable for severe services where tightness is essential and operation is frequent.

Study the section view for example. Notice the extra heavy spindle with perfectly machined threads of correct pitch and lead to insure tight closure with least closing effort. The bevel face of the seat ring parallels and equals that of the disc. There is no overhang; disc will not have shoulders or grooves cut in it when regrinding. Also, the disc is self-adjusted to the seat by the crowned spindle end.

From wheel nut to Jenkins specially wear-resistant nickel alloy seat, you will find perfection of design and workmanship in every detail of Fig. 970. It is available in a wide range of sizes; globe or angle, screwed or flanged—for steam services up to 300 lb.; 600 lb. non-shock cold oil, water, gas. You can obtain prompt delivery from stock at reliable supply houses everywhere.

JENKINS BROS., BRIDGEPORT, CONN.

LOOK TO Jenkins FOR THE BEST IN VALVE DESIGN

PLAGUE!

Here it is – the scourge of the mill! This deadly germ is a photo-micrograph of a simple rayon knot–the cause of loom stoppage, cloth seconds and endless weaving ills. No mill man needs to be told that knots pick up dirt, break, pull apart, cause mispicks, overshots and broken filaments.

Get rid of knots in the yarn and you get rid of one of the most irritating of all mill diseases.

And that is exactly what "Continuous Process" Spun-Lo Rayon has achieved. Because it is spun, bleached, dried, treated and twisted in one continuous operation without once being touched by human hands, the yarn is virtually knot-free.

Any mill man who has run "Continuous Process" Spun-Lo Rayon will tell you the same story–the knot scourge has met its master.

"Continuous Process"

Spun-lo Rayon

Reg. U. S. Pat. Off.

INDUSTRIAL RAYON CORPORATION · CLEVELAND, OHIO

NEW YORK OFFICE • 500 FIFTH AVENUE

RODA — High grade gas, by-product and steam coal from Wise County, Va., on the Interstate Railroad.

DENDRON — High grade gas, by-product, steam and domestic coal from Wise County, Va., on the Interstate Railroad.

STONEGA — High grade, high volatile steam and by-product coal from Wise County, Va., on the Interstate Railroad.

PREMIX STOKER — A laboratory controlled product blended to meet exacting stoker requirements. From Wise County, Va., on the Interstate Railroad.

COKE — Roda and Stonega from Wise County, Va., and Connellsville Coke from Pennsylvania.

CRITERION COAL — High grade gas, by-product, steam and domestic coal—Pittsburgh seam from Irwin Basin, Westmoreland County, Pennsylvania, on the Penna. Railroad.

CROZER — Genuine Third Vein Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railroad.

Admiralty Coal — Genuine New River Smokeless, Beckley or Sewall seam from Raleigh County, W. Va., C. & O. and Virginian Railroads.

Old Kentucky — Hazard No. 4 and No. 7 steam and domestic coal from Wiscoal, Knott County, Kentucky, on the L. & N. Railroad.

GENCO — Steam and domestic coals from a number of producing districts.

ANTHRACITE — Premium and standard qualities in the entire range of Anthracite burning characteristics.

Capable engineering personnel and the experience gained through long and varied marketing activity assures proper application of one of the above brands and effective servicing of any fuel requirement.

General Coal Company

123 SOUTH BROAD STREET . . . . . PHILADELPHIA, PA.

Branches

BLUEFIELD, W. VA.
BOSTON
BUFFALO
CHARLESTON
CHARLOTTE, N. C.
CINCINNATI
DETROIT
NEW YORK
NORFOLK
PITTSBURGH

yarn dyed fabrics ...THEY
HELP YOU TO SELL (NOT PEDDLE) YOUR PRODUCT
To put your selling on a profitable basis,—to GET YOUR PRICE,—your fabrics must be DIFFERENT; they must have INDIVIDUALITY.
Make your fabrics with colored yarns and you can give them not only individuality which will permit more profit, but also a VARIETY of color and design which will greatly broaden your market by appealing to many tastes.
Use Franklin Process Colored Yarns and you also get many service PLUSES (at no extra cost) which only our unequalled experience and volume make possible. These pluses include valuable color and yarn suggestions as well as unusually prompt, efficient and COMPLETE service.
Franklin Process
★ LARGEST PACKAGE DYERS IN THE WORLD
PROVIDENCE • PHILADELPHIA • GREENVILLE • CHATTANOOGA
New York Rep., 40 Worth Street; Chicago Rep., 100 West Monroe Street

A "*MUST*" ITEM IN YOUR PREPAREDNESS PROGRAM

THE importance of card clothing is much greater than its relative cost would indicate, for its quality determines not only the performance of your cards but also the performance of other expensive equipment. Therefore, to be prepared for today's abnormal demands, make proper card clothing maintenance a "must" item.

If you so desire, one of our service men will inspect your cards and recommend a maintenance program that will enable you to budget your card repair expenditures over a period and to assure prompt card clothing deliveries by anticipating your requirements.

Ask Our Nearest Office About These Ashworth Surveys

ASHWORTH

ASHWORTH BROS., INC.

PIONEERS IN CARD CLOTHING . . .

Woolen Div. AMERICAN CARD CLOTHING CO.

3 FACTORIES
FALL RIVER
WORCESTER,
PHILADELPHIA

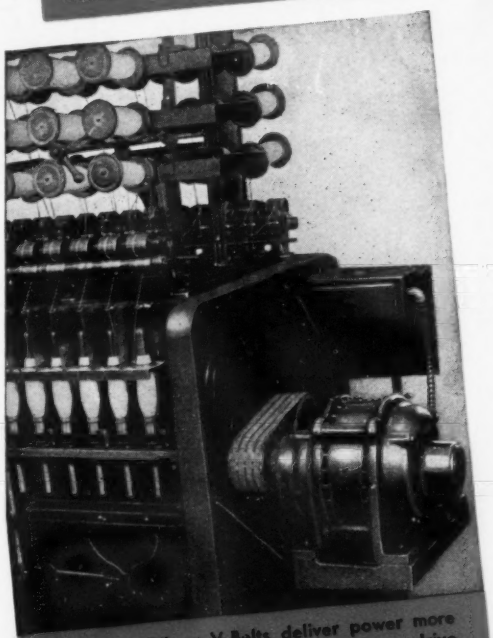
6 REPAIR SHOPS
FALL RIVER, PHILADELPHIA
CHARLOTTE, GREENVILLE,
ATLANTA, DALLAS

7 DISTRIBUTING POINTS
FALL RIVER, WORCESTER
PHILADELPHIA, CHARLOTTE,
GREENVILLE, ATLANTA, DALLAS

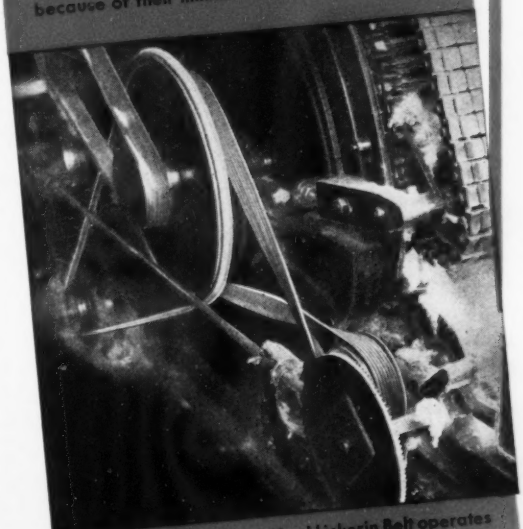
SOUTHWESTERN REPRESENTATIVE: • TEXTILE SUPPLY CO., DALLAS, TEXAS

PRODUCTS AND SERVICES: Card Clothing for Cotton, Wool, Worsted, Silk and Asbestos Cards and for all Types of Napping Machinery • Brusher Clothing and Card Clothing for Special Purposes • Lickerin Wire and Garnet Wire • Sole Distributors for Platt's Metallic Wire • Lickerins and Top Flats Reclothed

"Gilmer BELTS cut our maintenance costs . . . speeded production" say leading textile operators



1. These Gilmer V-Belts deliver power more efficiently on this spinning frame drive because of their minimum stretch and slippage.



2. This Gilmer Kable Kord Lickerin Belt operates a carding machine with fixed center drive, and needs no take-up because it's practically stretch-free. Despite the 180-degree twists, this belt won't fray at the edges and lasts longer.

Gilmer Belts for various textile drives can help you increase your output *and* save money, because Gilmers grip surely and are practically stretch-free.

Call in a Gilmer Field Engineer to survey your belt drives. He'll show you how to cut power costs and earn more from each machine. For more efficient power-transmission . . .

GILMER KABLE KORD LICKERIN BELTS increase production on carding machines, and wear the longest of any belt on the market. These belts have minimum stretch, an important feature where fixed centers permit no adjustment. No time is wasted on take-ups because Kable Kord is built on the contactor belt principle with endless cord, two-belts-in-one construction . . . one for *grip*, one for *pull*. Rugged outer jackets keep edges from fraying, even with the 180-degree twist and flanged pulley.

GILMER V-BELTS FOR SPINNING-FRAME DRIVES give excellent service on power drives from motors to spinning frames. They last longer under the repeated strain of high starting torque because of their unusual tensile strength . . . they deliver power more efficiently because of their minimum stretch.

GILMER CONE-DRIVE BELTS last longer in tough service since they have an endless cord, full-jacketed construction. Their rugged jackets won't fray at the edges despite frequent shifting, yet shift easily even with their high coefficient of friction. Maintenance costs are reduced, for these belts are practically stretch-free and require no splicing or lacing.

GILMER ENDLESS ROUND BELTS FOR CARDING MACHINES have extremely low stretch compared with cotton bands, needing no take-ups or adjustments and eliminating maintenance expense. Their high tensile strength assures long life.

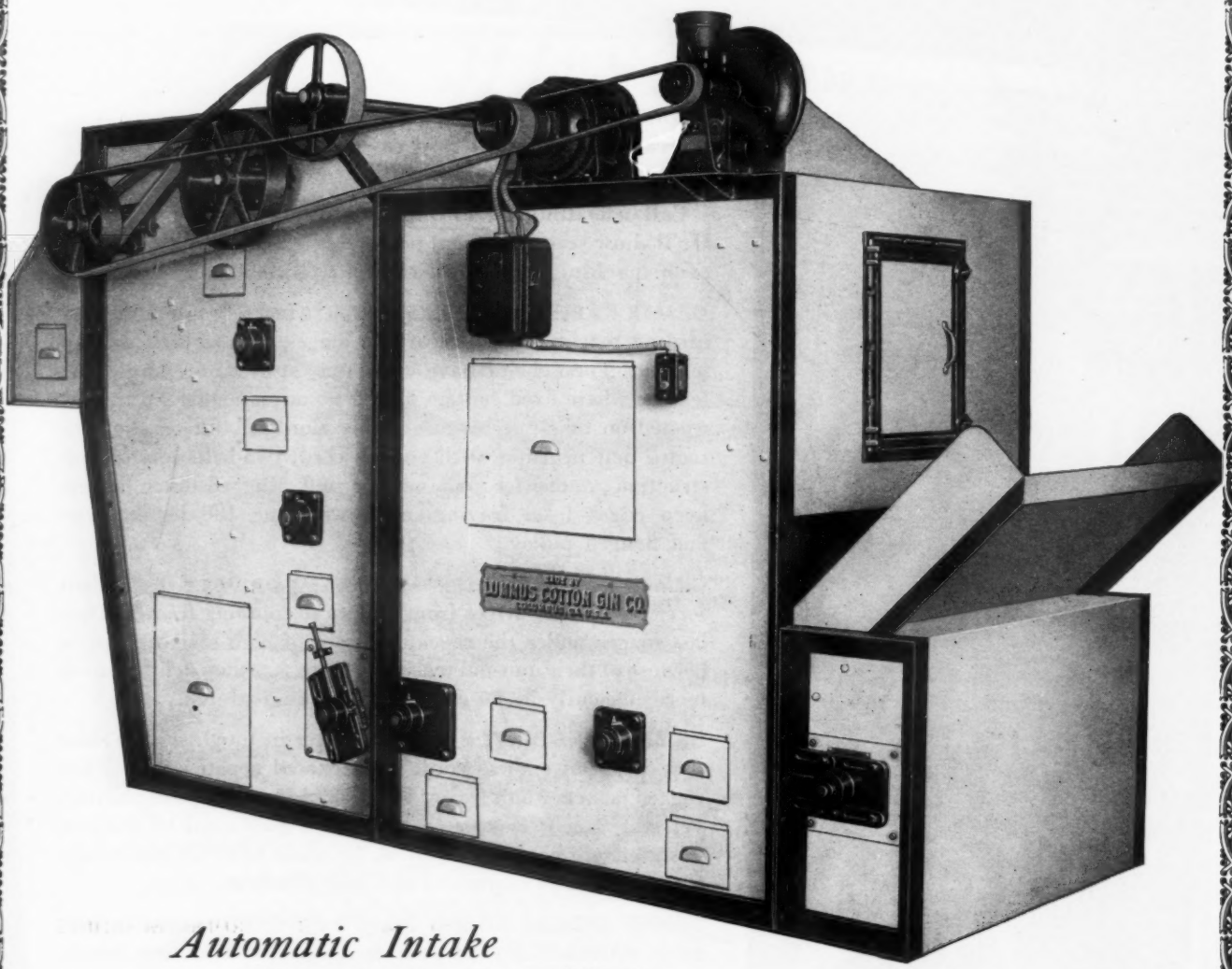
GILMER ENDLESS CORD SPINNER BELTS FOR SILK-THROWING combine high tensile strength, minimum stretch and easy flexing qualities. Their smooth surface has no uneven section to jar the spindles. They maintain true spindle speed and uniform thread twist, helping to increase output and to produce excellent finished thread.

Gilmer BELTS

L. H. GILMER COMPANY, *TACONY, PHILADELPHIA, PA.*

"The right transmission belt for every purpose"

THE LUMMUS BLENDING FEEDER



Automatic Intake
Cannot be Overfilled
Improved Cleaning Grids
Individual Motor and Dust Fan
All Ball Bearing Throughout

Sold by

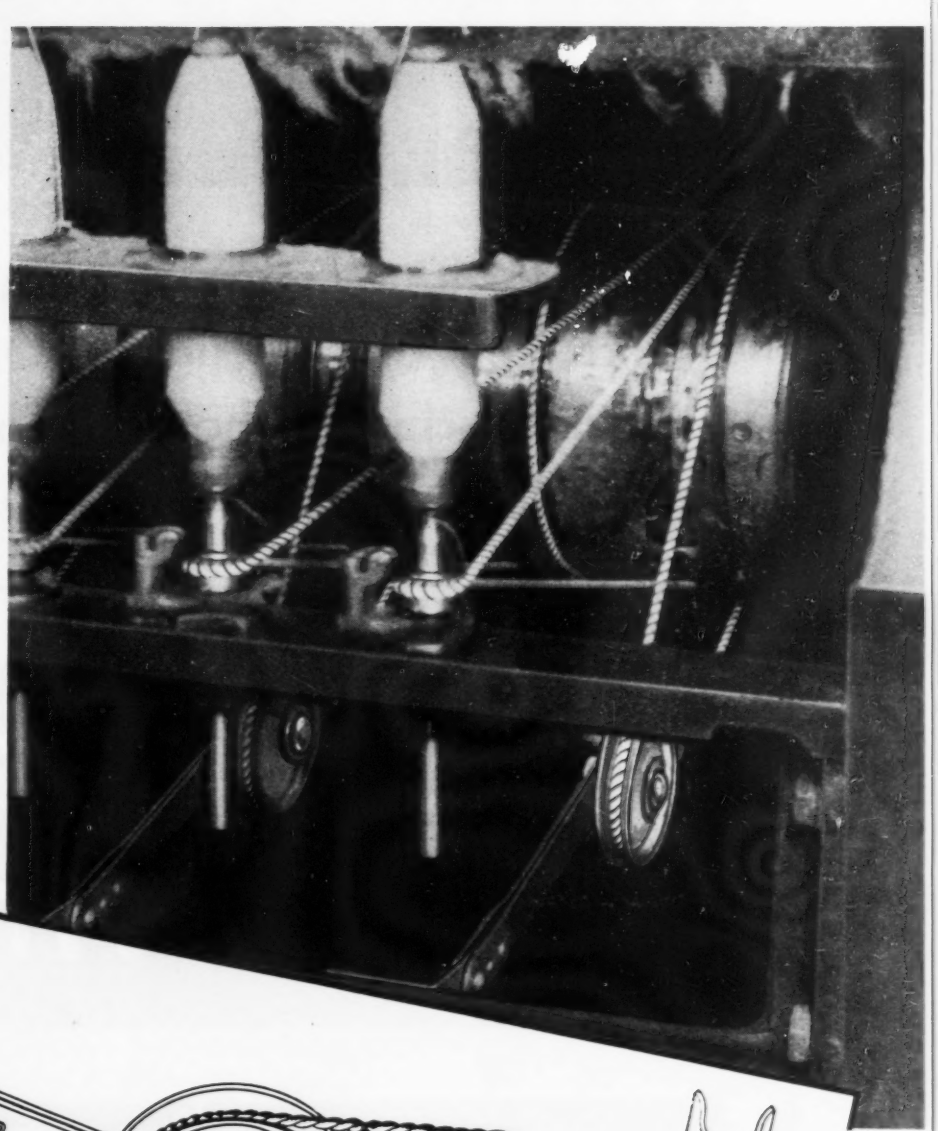
AldricH MachinE WorkS

Greenwood, South Carolina

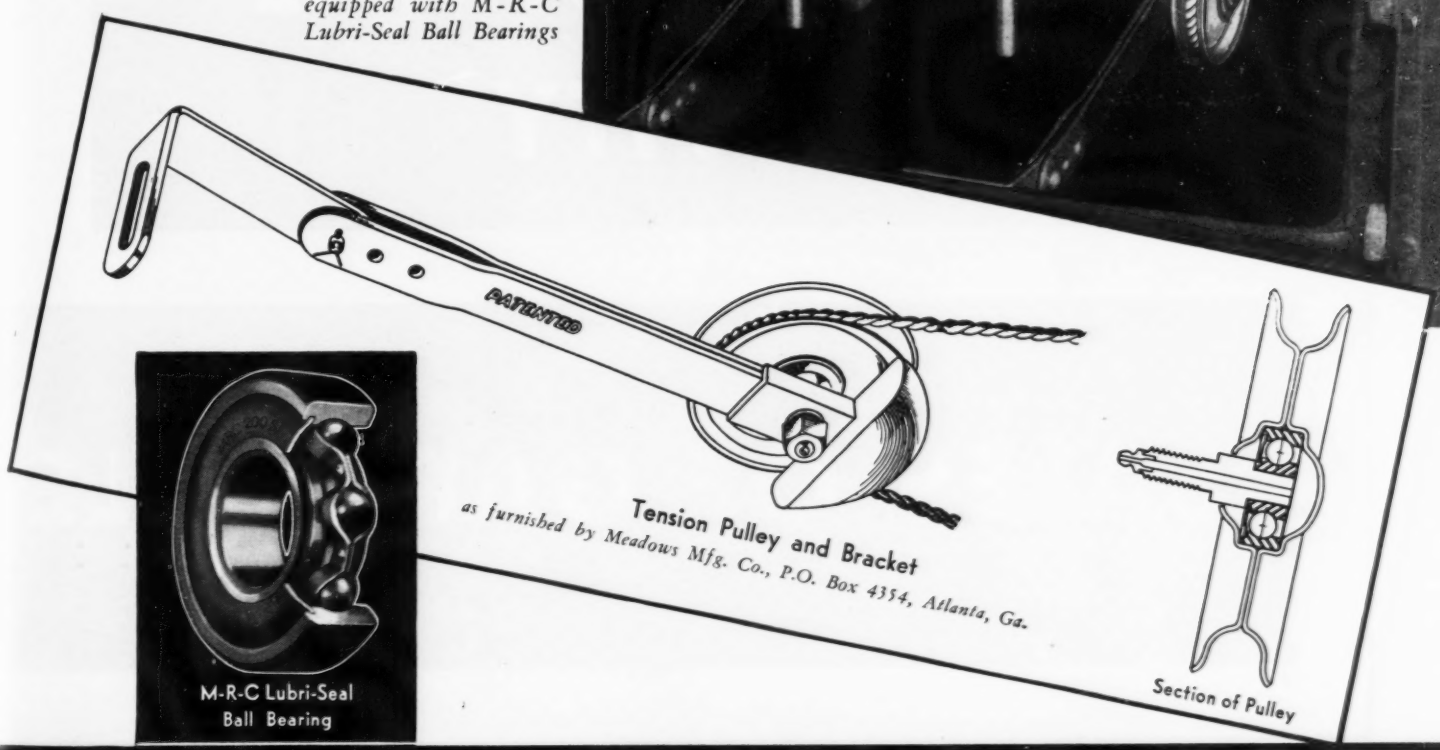
M-R-C *and Meadows*

M-R-C's extensive experience of over forty years in applying ball bearings to many thousands of mechanisms contributes to the successful performance of

MEADOWS
Ball Bearing Tension Pulleys



Installation of a spinning frame using MEADOWS Band Tension Pulleys equipped with M-R-C Lubri-Seal Ball Bearings



Tension Pulley and Bracket
as furnished by Meadows Mfg. Co., P.O. Box 4354, Atlanta, Ga.

M-R-C Lubri-Seal Ball Bearing

Section of Pulley

M-R-C BALL BEARINGS

GURNEY SRB STROM

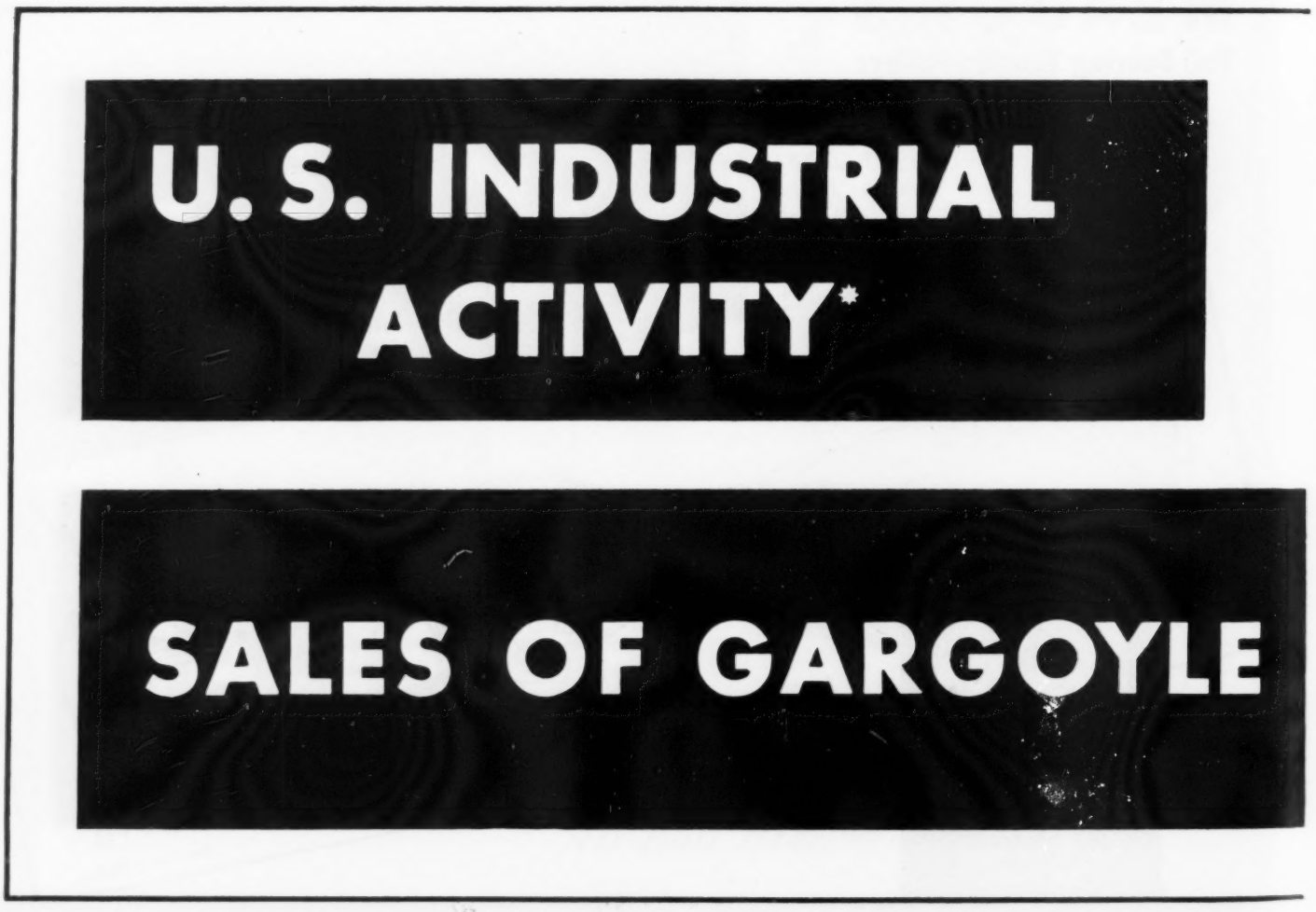
MARLIN - ROCKWELL CORPORATION

Executive Offices: JAMESTOWN, N. Y.

Factories at: JAMESTOWN, N. Y. and PLAINVILLE, CONN.

When OPM

Production Men Throughout Industry Demand and Rely on the Highest Quality Lubricants for Their Machines. The Tremendous Sales Increase of Gargoyle Lubricants Proves This to be True.



CALL IN Socony-Vacuum for

Says "RUSH"

INDUSTRY'S MARCHING ORDERS are "double-quick"! Machine replacements and parts are hard to get. So, to assure continuous, high-speed production, operating men agree on this point:

Today—there can be no compromise with the quality of industrial lubrication!

When men in industry take this position, what brand do they turn to? *They turn to Gargoyle Lubricants!* The record speaks for itself!

And that record gives you an answer to *your* No. 1 problem. Protect *your* production with the world's No. 1 line of industrial lubricants —Gargoyle Oils and Greases.

• • •

SOCONY-VACUUM OIL COMPANY, INC. · Standard Oil of New York Div. · White Star Div. · Lubrite Div. · Chicago Div. White Eagle Div. · Wadhams Div. · Southeastern Div. (Baltimore) · Magnolia Petroleum Co. · General Petroleum Corporation of California.

LOOK AT THE RECORD. IN TIMES LIKE THESE, INDUSTRY DEMANDS QUALITY. LET THIS CHART BE YOUR GUIDE, TOO

Chart shows percent of Gargoyle Lubricants sales increase compared to U.S. Industrial Activity—May, 1940-May, 1941

LUBRICANTS

GARGOYLE Lubricants

*SOURCE—Business Week Index of Industrial Activity.

"Correct Lubrication"

SPRAY COTTON MILLS CHOSE

Spray Cotton Mills, of Spray, N. C., is another well-known cotton mill that chooses Rockwood pivoted motor bases to increase production and improve quality of work from their spinning frames.

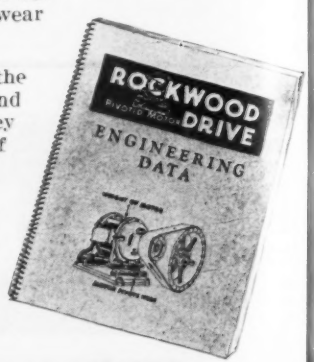
YOU, TOO, CAN SPEED UP PRODUCTION WITH ROCKWOOD PIVOTED MOTOR BASES

Fixed center belt drives are found wanting in modern cotton mills. The newer and better plan is to do away with manually adjusted motors on old fixed center slide rails and mount them on Rockwood pivoted bases. This is because the pivoted motor mounting automatically keeps the belts at correct tightness all the time and for all loads and thus assures more production and improved quality of work without further attention. That is why modernization programs in leading cotton mills almost invariably include Rockwood pivoted bases—once and for all to make their belt drives dependable and satisfactory.

If you mount your motors on Rockwood pivoted motor bases, you, too, can be sure your belts are not only tight but always the *correct tightness to match their loads—automatically and instantly.* This is the truly remarkable feature of the pivoted motor drive—that the belt tension is increased when the load increases and slacked off again when the load decreases—automatically and without further attention. And it does this regardless of belt stretch or length. Thus driven machine speeds are maintained and machines produce to capacity—belt slip is eliminated—all the power is put to work and of course the belts wear nearly twice as long.

More than 6000 Rockwood Drives in the leading cotton mills driving spinning and twister frames alone do prove that they save money and improve the quality of work done.

WRITE FOR THIS ROCKWOOD pivoted drive selection book. With it anyone can select the right drive—you do not have to be an engineer. ROCKWOOD DRIVES can be installed in an hour or more. Their cost is low and they are immediately available from stock.



ROCKWOOD MANUFACTURING CO., INDIANAPOLIS, IND

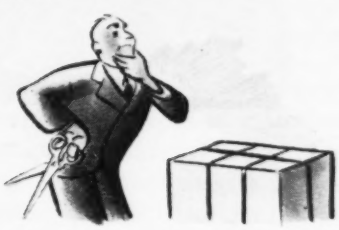
Debutantes or textile shipments...

These fast-moving days call for streamlined packaging!

To win and hold customers against modern competition, leading textile manufacturers are...

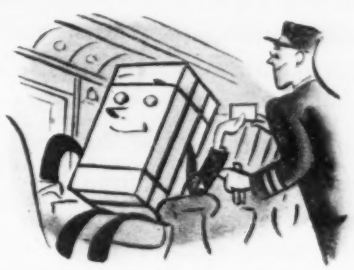
- *trimming excess weight and bulk from their shipping boxes—*
- *streamlining their entire shipping setup—*
- *and cutting delivery costs—*

by packing in Gaylord fibreboard textile boxes!



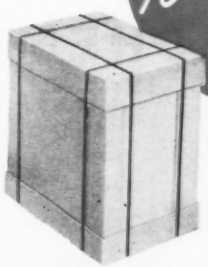
Engineered by the Gaylord specialists who pioneered fibreboard shipping cases for the textile industry, these lightweight, sturdy boxes...

- *save up to 10% on warehouse space—*
- *speed up packing and handling all along the line—*
- *often pay for themselves out of freight savings!*



Yet high-speed jolts and strains that would shatter heavier, more rigid materials seldom phase tough, resilient Gaylord fibreboard! And every Gaylord case is expertly designed in modern Gaylord laboratories to provide the

famous Gaylord Extra Margin of Safety —your assurance against unlooked for emergencies not provided for in "standard specifications!"



Gaylord Boxes

CORRUGATED AND SOLID FIBRE

Also Gaylord Folding Cartons... Grocery Bags and Sacks... Kraft and Specialties

GAYLORD CONTAINER CORPORATION

General Offices: SAINT LOUIS

New York • Chicago • San Francisco • Atlanta • New Orleans • Jersey City • Seattle • Indianapolis
Houston • Los Angeles • Oakland • Minneapolis • Dallas • Jacksonville • Columbus • Fort Worth
Detroit • Tampa • Cincinnati • Des Moines • Oklahoma City • Portland • Greenville • San Antonio
Memphis • Kansas City • Milwaukee • Bogalusa • Weslaco • Greensboro

AN OPEN LETTER TO AMERICAN INDUSTRY FROM DU PONT

★ Many manufacturers are confronted with serious problems arising out of the present national emergency. Overnight, whole plants must be geared for efficient, high-speed production of unfamiliar parts. Shorter methods and processes must be worked out quickly – new chemicals must be found to replace those not readily obtainable.

To manufacturers faced with these and other problems which involve chemicals or the application of chemicals, Du Pont offers the assistance of its Technical Service staff.

With our background of experience and research, we may be able to suggest possibilities you have not yet considered. Perhaps we can supply technical information to help you find suitable new materials or methods. The results of research in unrelated fields may have an unexpected bearing on your specific problem.

Naturally, there are situations where little or nothing can be done at present. When in our opinion such a condition exists, we will frankly tell you so.

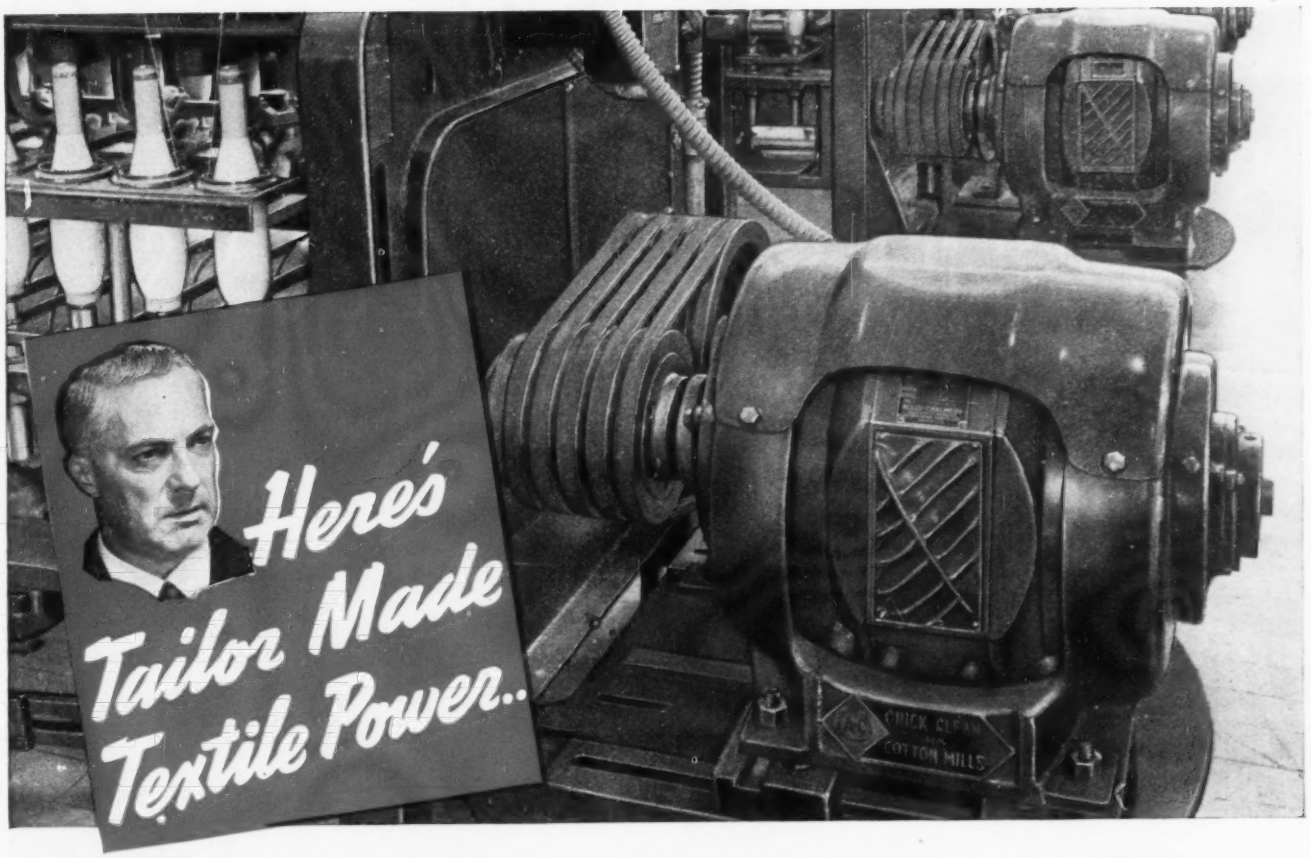
And when this period of unusual stress is past, the skill and competence acquired during 139 years of Du Pont chemical research will still be available to assist you in readjusting your program to normal requirements.

DU PONT
REG. U. S. PAT. OFF.

R&H CHEMICALS *for Textile Processing*

E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED

THE R. & H. CHEMICALS DEPARTMENT
WILMINGTON, DELAWARE



A Motor That Lint Can't Clog!

Allis-Chalmers Quick-Clean Lo-Maintenance Motors Avert Shut-Downs . . . Beat Power-Losses . . . Cut Costs with Efficient New Design for Textile Mills.

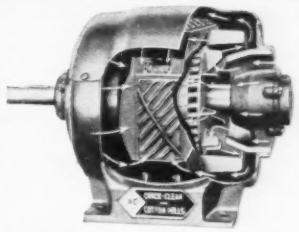
LINT AND FLY and dust—the toughest textile operating conditions can't stop the Allis-Chalmers Quick-Clean Motor . . . because it's designed and built to clean itself!

A sensational, new "free-flow" construction forces lint in *and out* through big, unrestricted air passages . . . over hard, smooth-as-glass interior surfaces that *can't collect motor-clogging particles.*

No more shut-downs . . . no more time-waste . . . no more production losses! All working parts are dust sealed. Distortionless stator is easily removable. Coils are shielded. Indestructible rotor is mounted on ball bearings in sealed cartridge units that keep oil in . . . keep dust out. Rigid foundation for stator and rotor is provided by one-piece steel base and bearing support.

Get the complete story on Quick-Clean Motors . . . how they are made . . . what savings they bring you. Call the district office near you. Or write direct to Allis-Chalmers, Milwaukee, Wisconsin.

A 1419



Check These Quick-Clean, "Free-Flow" Features:

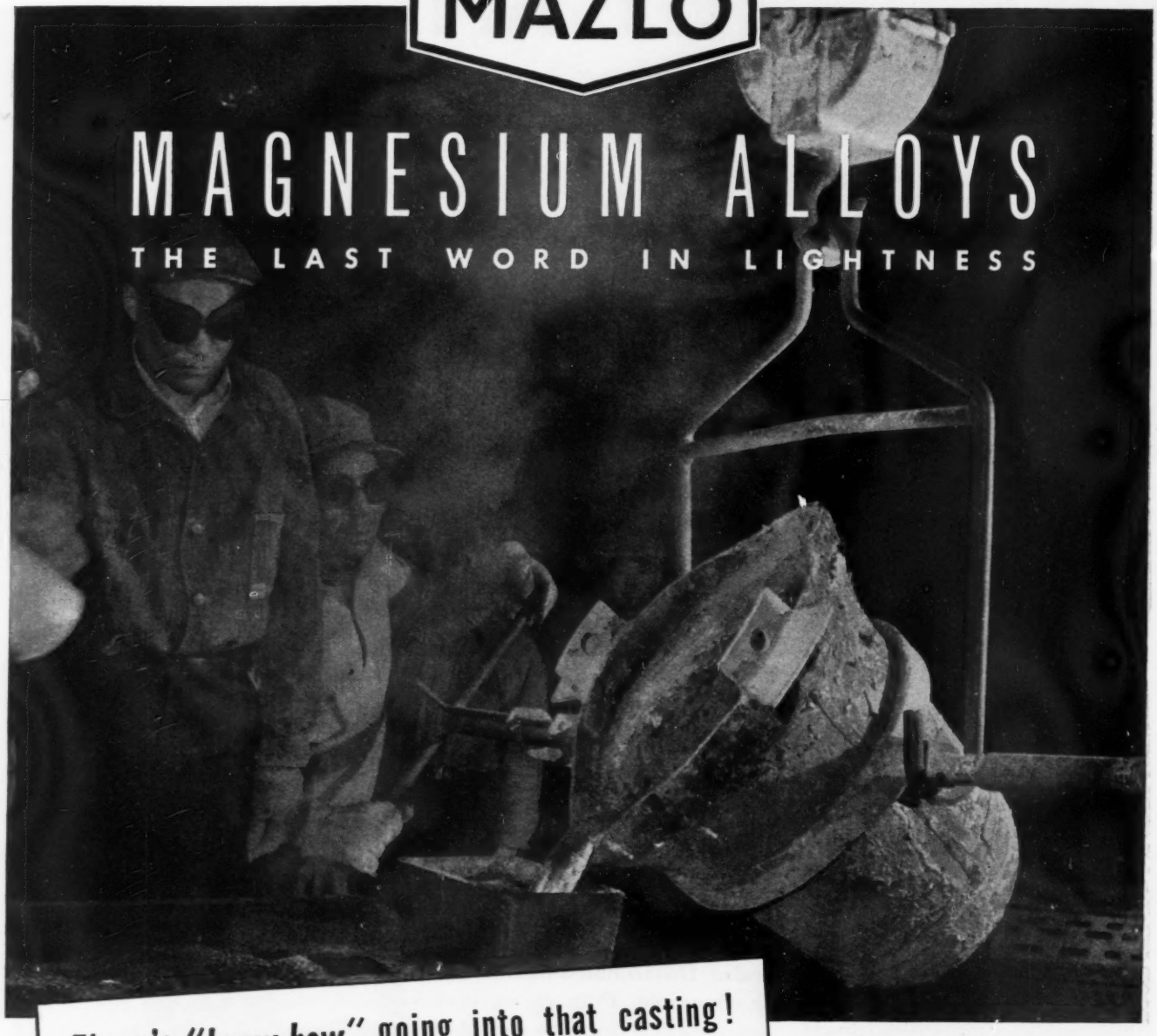
1. Dust-laden air, drawn into motor, is ejected at sides.
2. Air passages are large and unrestricted.
3. All interior surfaces are hard and smooth-as-glass, making it impossible for lint or dust to adhere.
4. All working parts are dust sealed for greater protection.
5. Coils are completely shielded to insure longer life.

ALLIS-CHALMERS LO-MAINTENANCE MOTORS

MAZLO

MAGNESIUM ALLOYS

THE LAST WORD IN LIGHTNESS



There's "*know-how*" going into that casting!

The increase in production of Magnesium products *twenty times* over normal peace-time demands of 1938 required far more than simple multiplication of manufacturing facilities and personnel. Every bit of the "know-how" gained throughout the years from research and practical application in every MAZLO Magnesium plant was employed to make this possible.

"Know-how" means the ability to produce Magnesium Alloys in the huge quantities and the many forms required today by the National Defense program; sand, permanent mold and die castings, forgings, sheet, tubing and extruded shapes. It means ability to meet today's rigid specifications.

MAZLO plants, in satisfying this extraordinary demand, are acquiring additional "know-how". Thus every user of MAZLO Magnesium Alloys will profit as deliveries to normal markets are resumed.

MAZLO

REG. U.S. PAT. OFF.

DEFENSE COMES FIRST

To meet the needs of National Defense, the American Magnesium Corporation is increasing its manufacturing facilities at a rate many times that required by normal peace-time markets. When the emergency is past there will be an abundance of the fabricated forms of magnesium alloys available for industrial uses.

Meanwhile, magnesium is helping to meet the national emergency. Sales Agent: Aluminum Company of America, 1704 Gulf Building, Pittsburgh, Pennsylvania.

AMERICAN MAGNESIUM CORPORATION

Subsidiary of Aluminum Company of America

OUR PATIENCE WORE OUT BEFORE THAT TABLECLOTH!

Laundered 5 times a week for 3 months, this Crown* Tested Spun Rayon Tablecloth proved it had plenty of stamina!

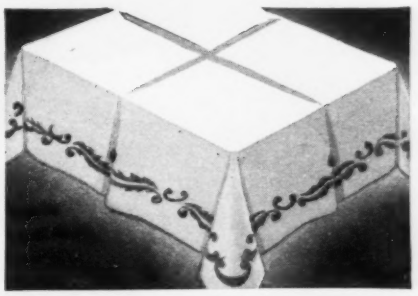
• • •

"Put it through the regular white wash every day until further notice." Those were the standing instructions we gave the laundryman. We wanted to see how long that Crown Tested Spun Rayon Tablecloth would stand up under commercial laundering.

One month later, the laundryman called. "This tablecloth must be made of iron," he said. "We've washed it 20 times and it still looks as good as new. Shall we keep on washing it?"

"Sure," we told him. "Keep on washing that cloth every day, and let us know the minute you find a break in the fabric."

When two months had passed, he called again. It was the same report. The cloth remained unbroken after 40 launderings. We told him to keep on washing.



Another month went by, bringing the total number of launderings up to 60. Still the cloth showed no ill effects from its daily bath. Satisfied that the cloth had all the stamina that would ever be required, we finally called off the test.

That happened two years ago. As a result, Crown Tested Spun Rayon Tablecloths were then placed on the market, and have established a remarkable record for durability both in home and in commercial service.

This is an example of what we mean when we say that the linen-like textures in Crown Tested Spun Rayon Fabrics have all the qualities needed to assure their success. So don't be concerned over the possibility of a linen shortage. Find out what you can do with spun rayon. Write today for complete information.

Facts about the linen-like textures in Crown Tested Spun Rayon Fabrics

1. ***Highly absorbent.*** Handkerchiefs recently tested 36% more absorbent than linen.
2. ***Washable.*** Tablecloth showed no sign of wear after three months' commercial launderings.
3. ***Fast colors.*** The spun rayon fabrics are not subject to crocking.
4. ***Serviceable.*** Proved by millions of yards of these fabrics which have gone into dresses and sports apparel.
5. ***Permanent whiteness.*** These fabrics stay really white. No tendency to yellow with age.
6. ***Lint-free.*** Suitable for cleaning eye-glasses, the best test of lint freedom.

*Reg. U. S. Pat. Off. Copr. 1941—American Viscose Corp.

AMERICAN VISCOSE CORPORATION

350 Fifth Ave., New York City

WORLD'S LARGEST PRODUCER OF RAYON YARN

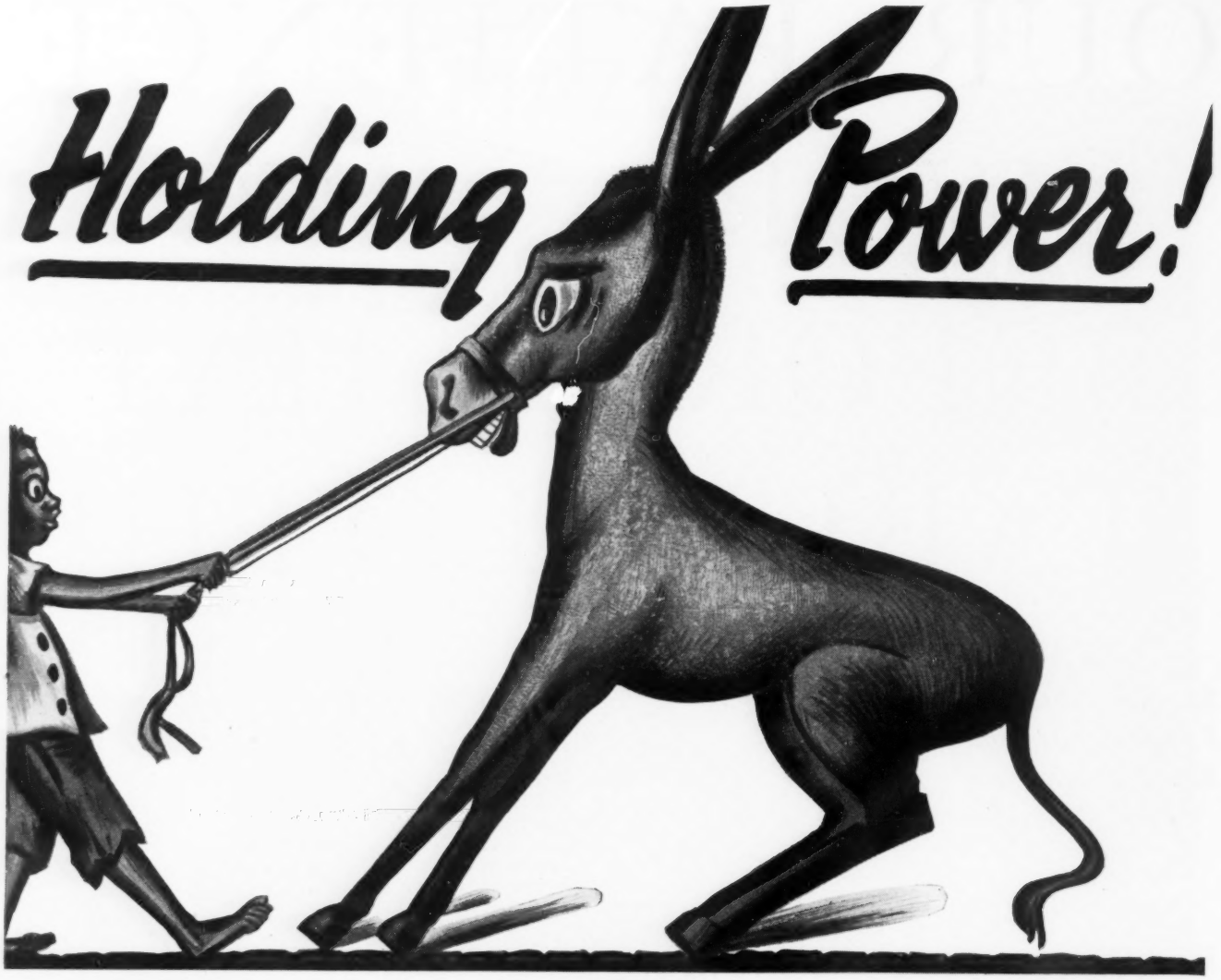
CROWN TESTED AND APPROVED RAYON FABRIC

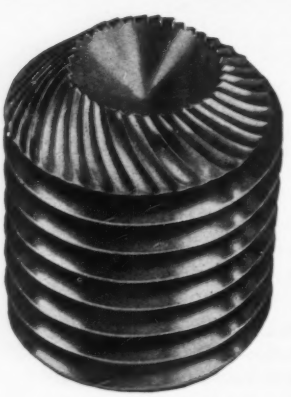
Sales Offices: New York, N. Y.; Charlotte, N. C.; Providence, R. I.; Philadelphia, Pa.

• • •

Plants at: Marcus Hook, Pa.; Roanoke, Va.; Lewistown, Pa.; Parkersburg, W. Va.; Nitro, W. Va.; Meadville, Pa.; Front Royal, Va.

Holding Power!





UNBRAKO

SELF-LOCKING SCREWS with the KNURLED POINTS

Because their famous characteristic is a mulish resistance to vibration, "Unbrako" Self-Lockers are being specified exclusively by many of the country's leading mills.

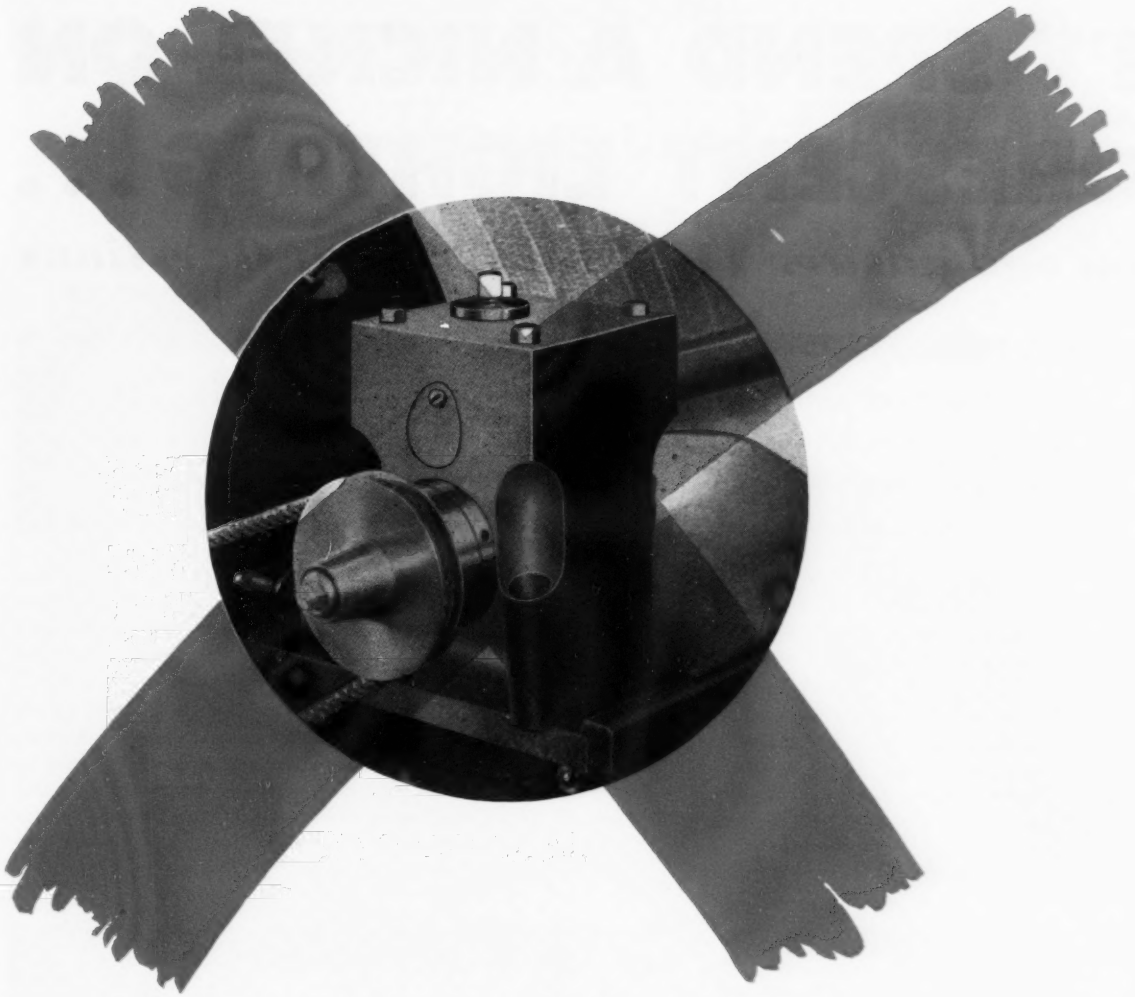
Set up with no more than average pressure, these trouble-savers stubbornly refuse to budge no matter how severe the unwinding tendency. *They stay set!* Yet they're as easily removed as they are applied, and they can be used repeatedly.

"Unbrako" Self-Lockers are sure protection.

Free bulletin gives details, write for it now . . . or better yet, specify "Unbrako" Self-Lockers on your next order. *It pays!*

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNA. BOX 582
— BRANCHES —
BOSTON • DETROIT • INDIANAPOLIS • CHICAGO • ST. LOUIS • SAN FRANCISCO

Reg. U. S. Pat. Office
UNBRAKO *Screw Products*



X TROUBLE SPOT?

Yes, worn, leaky comb boxes are often a major trouble spot in a mill. Excessive temperatures and frequent refillings are proof of such trouble.

Check your comb boxes today---then call in The Houghton Man and let him recommend a suitable Sta-Put lubricant for this application.

Houghton's Sta-Put Lubricants supply a maximum of oil at all times, for a minimum operating costs. They cling to metal surfaces, resisting leakage. And they have the power and oiliness to do that comb-box job better. They can save you time and money.

E. F. HOUGHTON & CO.
Third and Somerset Sts., Philadelphia
1301-05 West Morehead St., Charlotte

Houghton's

STA-PUT LUBRICANTS

DON'T SPEND A NICKEL ON FLUORESCENT LIGHTING . . .

until you can answer YES to these Four Questions

1 *Am I getting the best lighting for my business, competently planned by lighting engineers?*

"How much light do I need? How much can I afford to spend and what results can I expect from this new light source?"

Don't guess. Ask your G-E lamp distributor. He has behind him all the engineering resources of General Electric. He can call in local G-E engineers, averaging 16 years experience with General Electric, for help and advice so essential to the proper installation of fluorescent lighting. Your electric service company can also give you sound, up-to-the-minute help.

2 *Am I getting a sufficiently wide choice of fixtures so that I can select exactly the ones I need?*

"Have I looked over *enough* fixtures to be able to choose the ones that suit *me?* Am I getting fixtures on the basis of the amount of light I need, rather than on price alone?"

Ask General Electric! G. E. makes no fixtures for MAZDA F lamps, but cooperates with leading fixture manufacturers to assure fluorescent units geared to your requirements. More than 100 different types of tested, certified, guaranteed fixtures are now available. Your G-E lamp distributor carries many of them. See his complete line!

3 *Am I getting Certified Fluorescent Fixtures for top-notch lighting and dependable operation?*

"Will my fixtures start quickly, work efficiently, stand up under long usage? How can I be sure?"

Insist on tested, *Certified* guaranteed fixtures such as those with Fleur-O-Lier label or industrial fixtures with RLM label. Fleur-O-Lier fixtures are tested and certified by Electrical Testing Laboratories to meet specifications set up by MAZDA lamp manufacturers. You get a complete, written Fleur-O-Lier manufacturer's guarantee; and fixtures, ballasts, and starters that help give full light for current consumed.

4 *Am I getting the right lamps — lamps that will give maximum light for current they consume?*

"Will the fluorescent lamps I buy give maximum light throughout life at low cost? Can I get the same high quality which has made G-E MAZDA incandescent lamps a standard of performance?"

You can if you specify G-E MAZDA F lamps! . . . lamps that must pass hundreds of tests set up by MAZDA research. As a result of continued improvements, today's G-E MAZDA F lamps cost as much as 52% less than when G.E. produced the first practical fluorescent lamp. Yet they give up to 40% more light!

G.E. ANNOUNCES NEW LOW PRICES ON MAZDA F LAMPS

Effective August 1, 1941

14-watt T-12	was $1.05	NOW	90c
15-watt T-8	was 85c	NOW	75c
15-watt T-12	was $1.10	NOW	95c
20-watt T-12	was $1.10	NOW	95c
30-watt T-8	was $1.10	NOW	95c
40-watt T-12	was $1.60	NOW	$1.35
100-watt T-17	was $3.50	NOW	$3.00

Above prices refer to daylight and 3500° white.
Prices also reduced on soft white and colored G-E MAZDA F lamps.

G-E MAZDA LAMPS

GENERAL ELECTRIC

MAIL THIS COUPON TODAY!

General Electric Company, Dept. 166-C-H
Nela Park, Cleveland, Ohio

Please send me your new booklet, "Let Fluorescent Lighting Roll Back the Roof".

Name.....

Address.....

City.....*State*.....

"*We use* GULF LUBRICANTS to Insure Long Low-Cost Service from These New Warpers" . . . *Says this Overseer*

"We carefully maintain our equipment by following a Gulf engineer's recommendations to the letter."

"WHEN our new warpers were installed," says this Overseer, "we took action to insure long life and low maintenance costs—we called in a Gulf engineer and adopted the lubrication practice he advised. We knew from experience that a Gulf engineer recommends the proper application of just the right lubricant for every moving part."

This mill, like many others, realizes definite benefits from the use of Gulf quality lubricants and Gulf Engineering Service. They find that good lubrication pays dividends!

Are you entirely satisfied with the operation of your mill—with your production and repair costs? Ask a Gulf engineer to make a survey and give you his recommendations for the proper lubrication of each unit of equipment. His recommendations are based on sound knowledge and broad experience in the field.

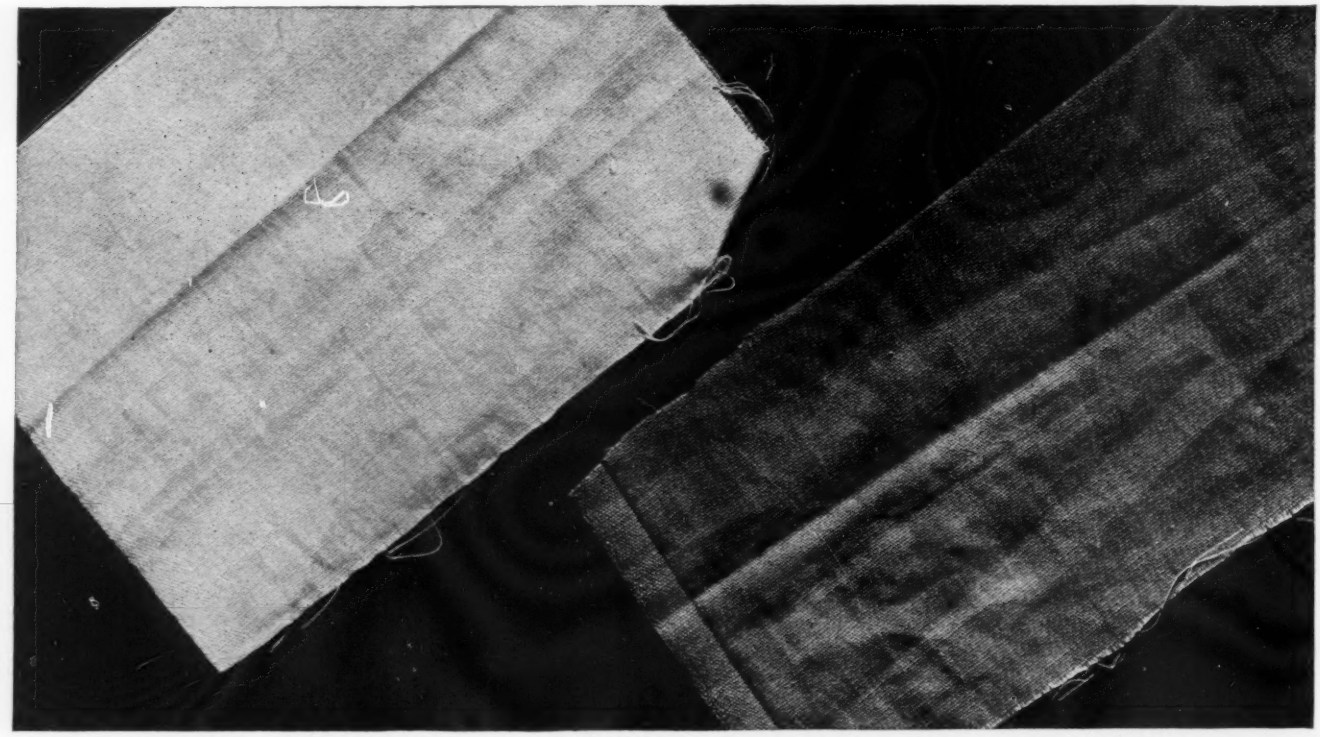
The Gulf line of more than 400 quality lubricants is quickly available to you through 1200 warehouses located throughout 30 states from Maine to New Mexico. Write or 'phone your nearest Gulf office today.

GULF INDUSTRIAL LUBRICATION

GULF OIL CORPORATION • GULF REFINING COMPANY • PITTSBURGH, PA.

THEY GREW UP TOGETHER.....

But one's a "black sheep"!



The other was bleached by the ACTIVATED TEXTONE—Hypochlorite Process and retained its strength!

● This is an unretouched photograph of two swatches of white cotton fabric after silver nitrate test for oxycellulose (the presence of which indicates degrading and weakening of fibres, causes yellowing on storage and results in uneven dyeing). Since oxycellulose precipitates silver, the darker swatch — bleached with ordinary hypochlorite—shows presence of a high degree of oxycellulose. The lighter swatch—bleached with hypochlorite *plus* Textone—developed *little* color. No oxycellulose indicated.

These two swatches are from the same piece of cloth and had received identical treatment, including the same kier boil, prior to bleaching. Therefore, the difference in oxycellulose is entirely due to the difference in the bleaching operation.

When Textone, a Mathieson developed sodium chlorite product, is added to regular hypochlorite bleach it is possible to bleach to highest and more permanent whites with maximum strength retention. And when properly handled this entirely new bleaching process *will not form* oxycellulose. An Activated Textone-hypochlorite bleach has enough oxidizing power to destroy all color in cotton fabrics—but *does not attack the fibre itself.* This eliminates the need for accurately controlling concentration, temperature or time of bleach. Textone ($NaClO_2$) controls and reinforces your regular hypochlorite —its use involves little change in bleach routine or equipment. And its bleaching power is equal to that of chemic of nearly *twice* the available chlorine.

Textone itself, highly soluble in water, is economical to use. Stable, up to and including 150 deg. C., none is lost in the bleaching operation. This permits every pound to do effective work. And the capacity of current equipment may be increased by adding Textone to the kiers, eliminating multiple boils. The oxidizing power of Textone is equivalent to 130% available chlorine.

We invite your inquiries in regard to Textone and the new Activated Textone - hypochlorite bleaching process. Our technical staff, the men who developed this remarkable process, will be glad to show you how it can improve *and* economize your bleach operations — improve the quality of your finished goods.

MATHIESON CHEMICALS

THE MATHIESON ALKALI WORKS, (INC.)

60 E. 42ND STREET, NEW YORK, N. Y.

SODIUM CHLORITE PRODUCTS . . . SODA ASH . . . CAUSTIC SODA . . . BICARBONATE OF SODA . . . LIQUID CHLORINE . . . BLEACHING POWDER . . . HTH PRODUCTS . . . AMMONIA, ANHYDROUS and AQUA . . . FUSED ALKALI PRODUCTS . . . SYNTHETIC SALT CAKE . . . DRY ICE . . . CARBONIC GAS

THE AMERICAN'S CREED

"Breathes there a man with soul so dead, who never to himself hath said, this is my own, my native land."

SCOTT

I believe in the United States of America, as a government of the people, by the people, for the people; whose just powers are derived from the consent of the governed; a democracy in a republic; a sovereign nation of many sovereign states; a perfect union, one and inseparable; established upon those principles of freedom, equality, justice and humanity for which American patriots sacrificed their lives and fortunes.

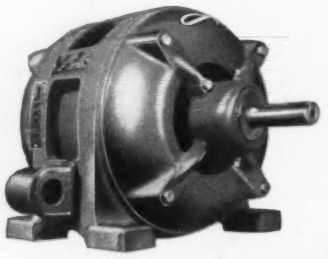
I therefore believe it is my duty to my country to love it, to support its constitution, to obey its laws, to respect its flag, and to defend it against all enemies.

The American's Creed by William Tyler Page was adopted by an Act of Congress, April 6, 1918.

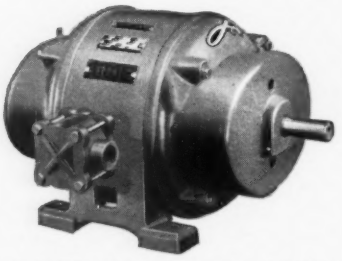
THE LOUIS ALLIS CO., MILWAUKEE WIS.

LOUIS ALLIS

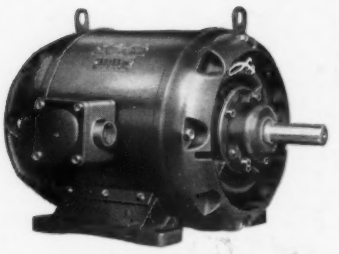
A Size and Type Electric Motor for Every Industrial Requirement



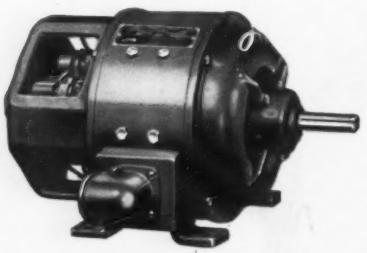
Standard open SQUIRREL CAGE polyphase motors are carefully engineered, precision built motors with rigid construction throughout and adequate insulation you can confidently apply to your toughest jobs.



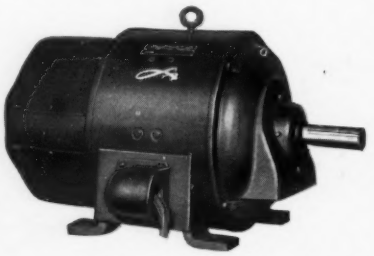
SPLASH-PROOF motor. Designed and built from the ground up as a real splash-proof motor—full protection against acid spills—splashing liquids—high humidity. Completely protected by cast iron housing.



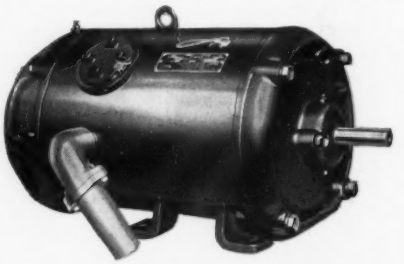
TOTALLY ENCLOSED FAN COOLED motors—for operation in atmospheres containing abrasive dust, corrosive fumes, dirt, oil, combustible dust, and similar conditions such as are usually found in machine shops, foundries, chemical plants, grain elevators, coal pulverizing plants, etc.



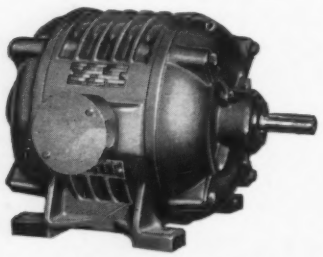
These DIRECT CURRENT motors are correctly engineered and precision built—available in a very wide range of both electrical and mechanical modifications. The extra rugged construction of these motors assures long life of dependable performance.



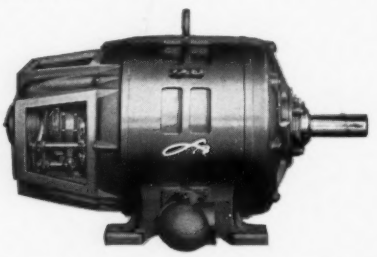
This PROTECTED D. C. motor has the same general construction features of the motor illustrated above. The specially designed protective end bell and armature coverings make this motor especially adaptable for use in coal mines, quarries, or where dropping particles may hit the motor.



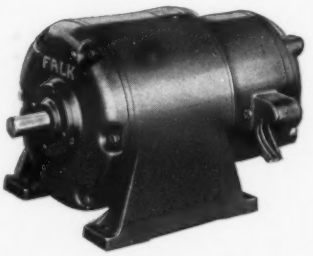
These Direct Current EXPLOSION-PROOF motors have been inspected and explosion-tested by the Bureau of Mines Laboratory. Also tested, listed and appoved by the Underwriters' Laboratories for all Class I, Group D explosive atmospheres.



A complete line of enclosed NON-VENTILATED motors is available in a wide range of mechanical and electrical characteristics. These motors are ruggedly constructed with solid cast iron housings to withstand severe treatment on difficult jobs.



These WOUND ROTOR (slip ring) motors are ruggedly constructed throughout. A wide range of speed variations are obtainable with comparatively simple control. Available with mechanical modifications for every industrial use.



Louis Allis motors can be supplied with a very wide range of various types of gear reducers—integral—all-motor—gear-head—vertical—right angle or parallel—the proper drive for every industrial application.

No matter what your electric motor problem or requirement may be—we earnestly request your inquiry. Your needs will receive our most prompt and careful attention in every way.

THE LOUIS ALLIS CO., MILWAUKEE, WISCONSIN

ONE BILLION YARDS OF RAYON PROCESSED WITH ONYXSAN WITHOUT ONE COMPLAINT ON LIGHT FASTNESS

A remarkable record established by a remarkable product.

Onyxsan is the accepted Cationic Finishing Agent of the American Dyeing Industry.

More Onyxsan is used than all other similar products combined.

For additional assurance against color fading, when unusual conditions are employed, Onyxsan-AD meets the most extreme tests.

If you are not using Onyxsan investigate this outstanding Cationic Finishing Agent. We will be glad to send samples or demonstrate its effectiveness in your plant. Your inquiries are solicited.

ONYX OIL & CHEMICAL CO.

JERSEY CITY, N. J.

New England Office: 100 Fountain St., Providence, R. I.
Charlotte Office: 121 E. 3rd St., Charlotte, N. C.
Atlanta: Cliff Smith, 444 Oakland Avenue, S. E.
Western Reps.: Maher Color & Chemical Co., Inc., Chicago, Ill.
Los Angeles, Calif.
In Canada: Onyx Oil & Chemical Co., Ltd., Montreal, P. Q.

SHAWNEE COUNTRY CLUB

BUCKWOOD INN

Shawnee-on-Delaware, Pennsylvania

Arthur Brown, President

A summer country home with a championship golf course! In the Poconos, only 85 miles from New York or Philadelphia, on the Delaware River near Delaware Water Gap.

Shawnee Country Club, scene of the annual Shawnee Open and the 1938 P.G.A. Championship.

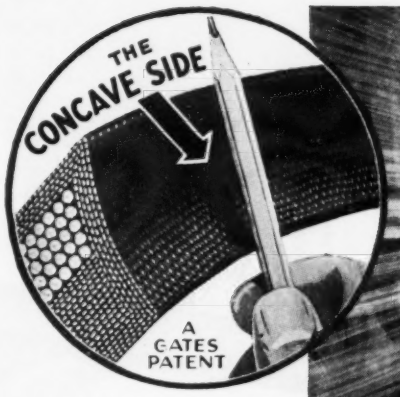
Right at the first tee, with golf privileges for guests, BUCKWOOD INN, modern concrete and hollow tile American Plan Inn featuring the utmost in cuisine and comfort.

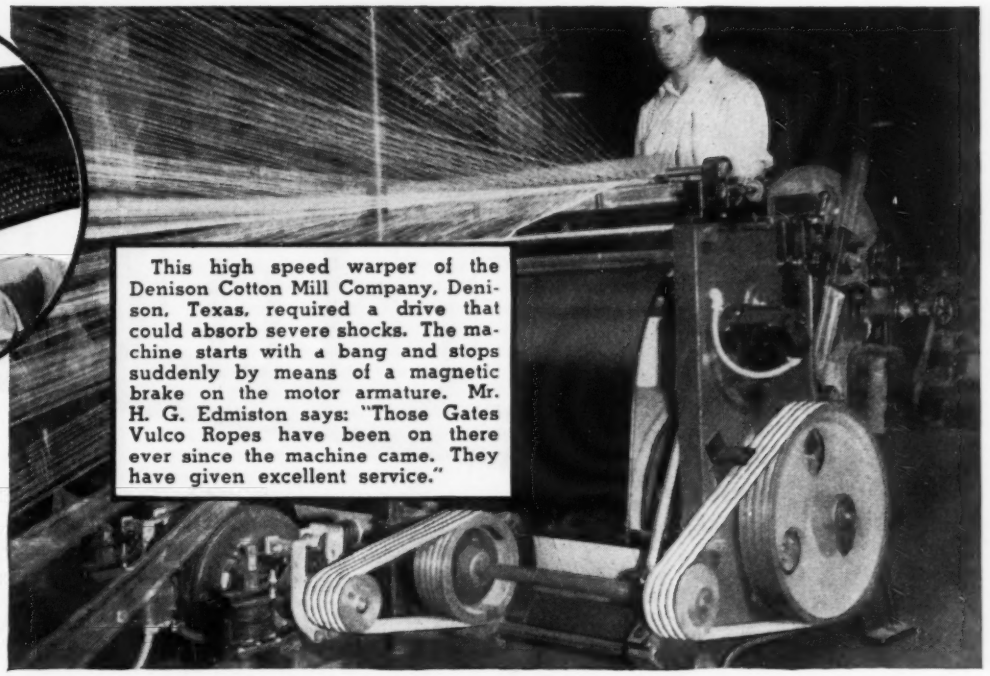
Swimming in a Hollywood pool overlooking the Delaware River; tennis, fishing, riding, etc. Exclusive clientele; for rates and reservations, address:

ARTHUR BROWN, *President*

BUCKWOOD INN • SHAWNEE-ON-DELAWARE • PA.

*N. Y. BOOKING OFFICE—HOTEL ASTOR, CIrcle 6-8874.





This high speed warper of the Denison Cotton Mill Company, Denison, Texas, required a drive that could absorb severe shocks. The machine starts with a bang and stops suddenly by means of a magnetic brake on the motor armature. Mr. H. G. Edmiston says: "Those Gates Vulco Ropes have been on there ever since the machine came. They have given excellent service."

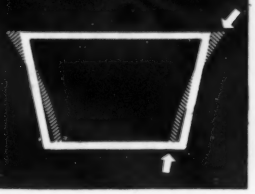
Grip a Bending V-Belt Like This

and learn of

A BIG SAVING *in Belt Costs and in Power!*

What Happens When a V-Belt Bends

FIG. 1



Here is a simple fact about V-belt wear that you can prove in two minutes —and it will save you real money.

Pick up any V-belt you have handy. Grip its sides with your fingers—then bend the belt as it would bend in going around a pulley. You will feel the sides of the belt *change* shape! If the sides were *straight* before bending, they become *convex* as the belt bends. (See Figure 1 on the left). Note the out-bulge of the sides.

Now look at Figure 2. This shows the *same* shape-change in a belt with the patented concave side. But what a different result! This belt, when bent, precisely fits the sheave groove. Two big savings result—(1) There is no side-bulge and this means uniform side-wall wear—*longer life!* (2) There is a full side-width grip on the pulley and this carries heavier loads without slippage—saving the belts and also saving your *power!*

The concave side is a Gates patent. Only belts built by Gates are built with the concave side.

THE GATES RUBBER COMPANY

Engineering Offices and Stocks in All Large Industrial Centers

GATES VULCO ROPE DRIVES

CHICAGO, ILL. 1524 South Western Ave.
HOBOKEN, N. J. Terminal Building
BIRMINGHAM, ALA. 1631 1st Ave., South
LOS ANGELES, CAL. 2240 E. Washington Blvd.
DENVER, COLO. 999 South Broadway
DALLAS, TEX. 2213 Griffin Street
PORTLAND, ORE. 333 N. W. 5th Avenue
SAN FRANCISCO, CAL. 2700 16th Street

the Performance

READ *what Users Say:*

HIGH PRODUCTION

• Cap maker says: "Union Special Lockstitch machines more than doubled production when used for binding peaks of canvas caps!"

QUALITY WORK

• Knitting company says: "Union Special Lockstitch machines produce a uniformly excellent quality of work trimming sweaters and sewing on pockets."

EASY OPERATION

• Shirt maker claims: "Union Special Lockstitch machine's smooth, vibrationless operation decreases operator fatigue considerably."

DEPENDABILITY

• Clothing manufacturer says: "Dependability is our first sewing machine requirement. We're using Union Special Lockstitch machines."

ORDERS from manufacturers whose plants already know the economy and speed of Lockstitch operation are increasing right along with the rise of the Lockstitch Sales Curve. OVER 60% of all Lockstitch sales are Repeat Orders! These are plants where Lockstitch performance has been proven—and approved for all single needle plain seaming operations.

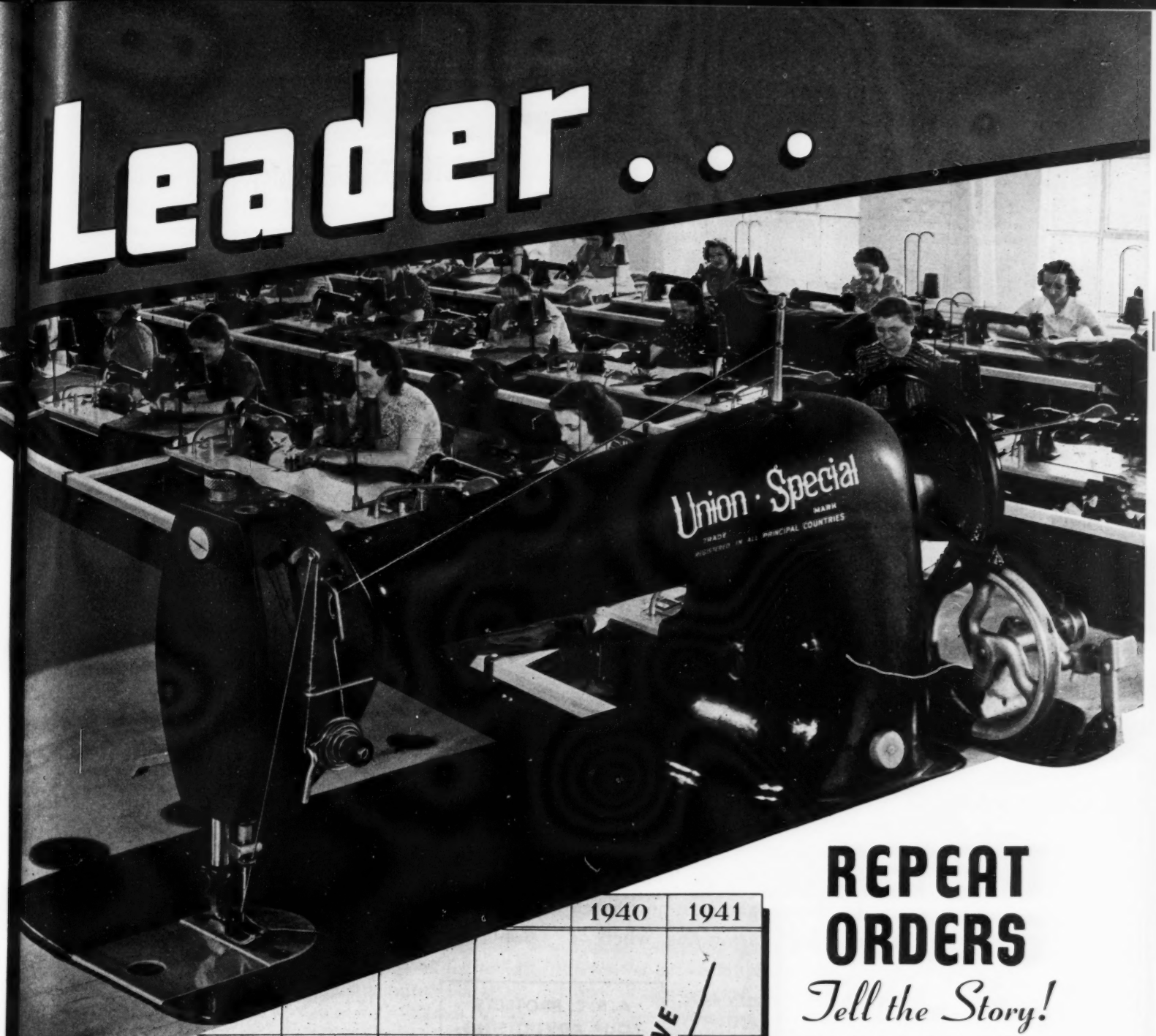
Remember this when you buy plain seamers: There is only one reason for repeat orders: BETTER PERFORMANCE AT LOWER COST. Put the Lockstitch to work in the "tough spots" in your plant — and you, too, will join the long list of Repeat Users of Lockstitch machines. Write for complete information today.

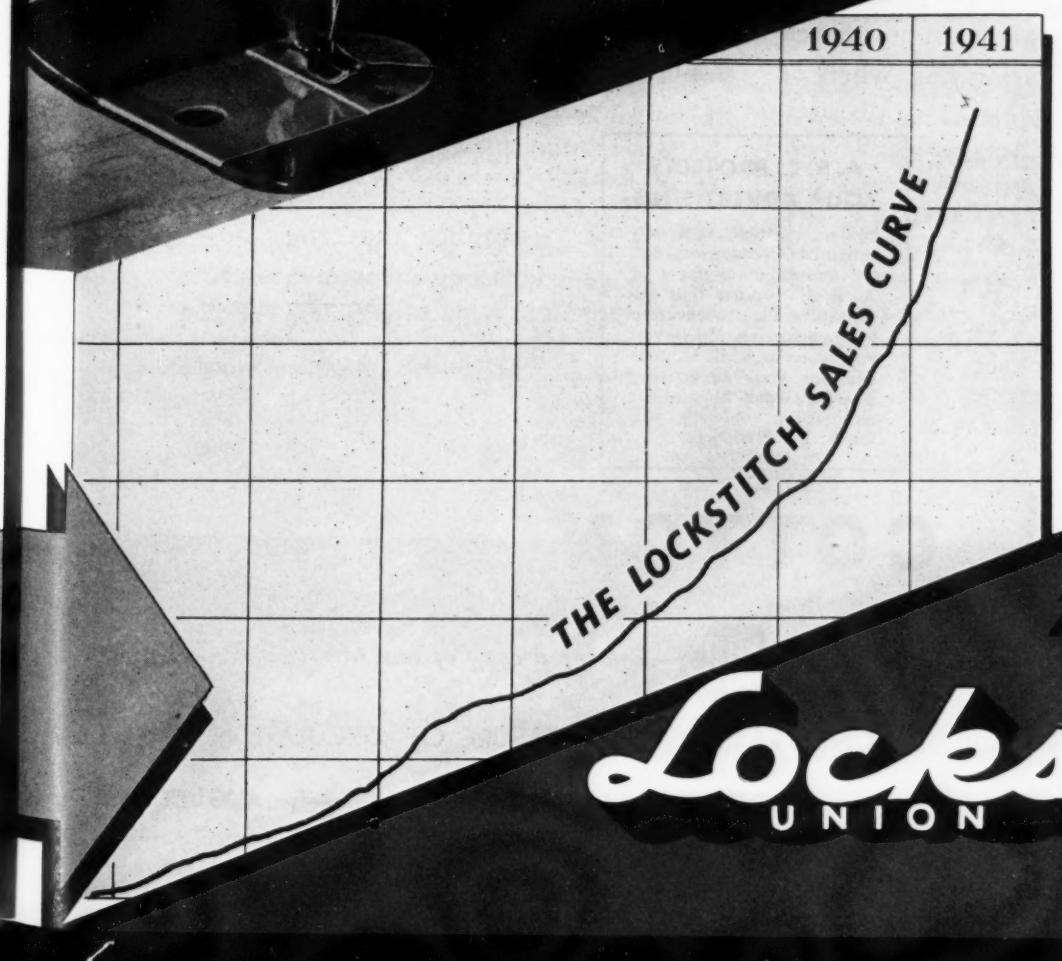
UNION SPECIAL MACHINE COMPANY

438 No. Franklin Street, Chicago, Illinois

Look at the **RECORD:**

Leader . . .





REPEAT ORDERS

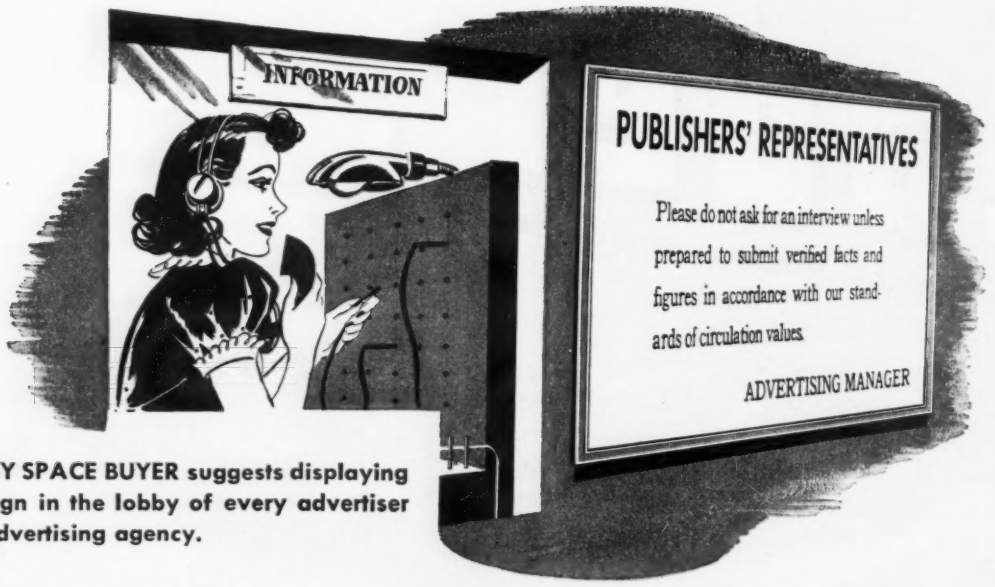
Tell the Story!

The chart at the left shows the curve for total net sales of Union Special LOCKSTITCH machines — *a curve continually forced upward by repeat orders!*

THE

Lockstitch

UNION SPECIAL


INFORMATION
PUBLISHERS' REPRESENTATIVES
Please do not ask for an interview unless prepared to submit verified facts and figures in accordance with our standards of circulation values.
ADVERTISING MANAGER

A BUSY SPACE BUYER suggests displaying this sign in the lobby of every advertiser and advertising agency.

Well—why not?

THE days of blind space buying are over. To ask an advertiser to select media on the basis of unsupported facts and figures is like asking him to sign a blank check.

Today advertisers have definite standards for circulation values. They want to know, by these standards, how much circulation a publication has, where it goes, how it was obtained, how much the readers paid and many other facts that bear on the advertising value of a business paper. With these facts, verified, advertisers can select media intelligently and buy space with assurance that they will get what they pay for.

To cooperate with advertisers and tell our circulation story by their own standards we belong to the Audit Bureau of Circulations, a cooperative organization of advertisers, advertising agencies and publishers. Our A. B. C. report giving complete and audited information about our circulation is the advertisers' assurance that their advertising investments are protected by known, verified values.

A. B. C. PROTECTS YOUR ADVERTISING

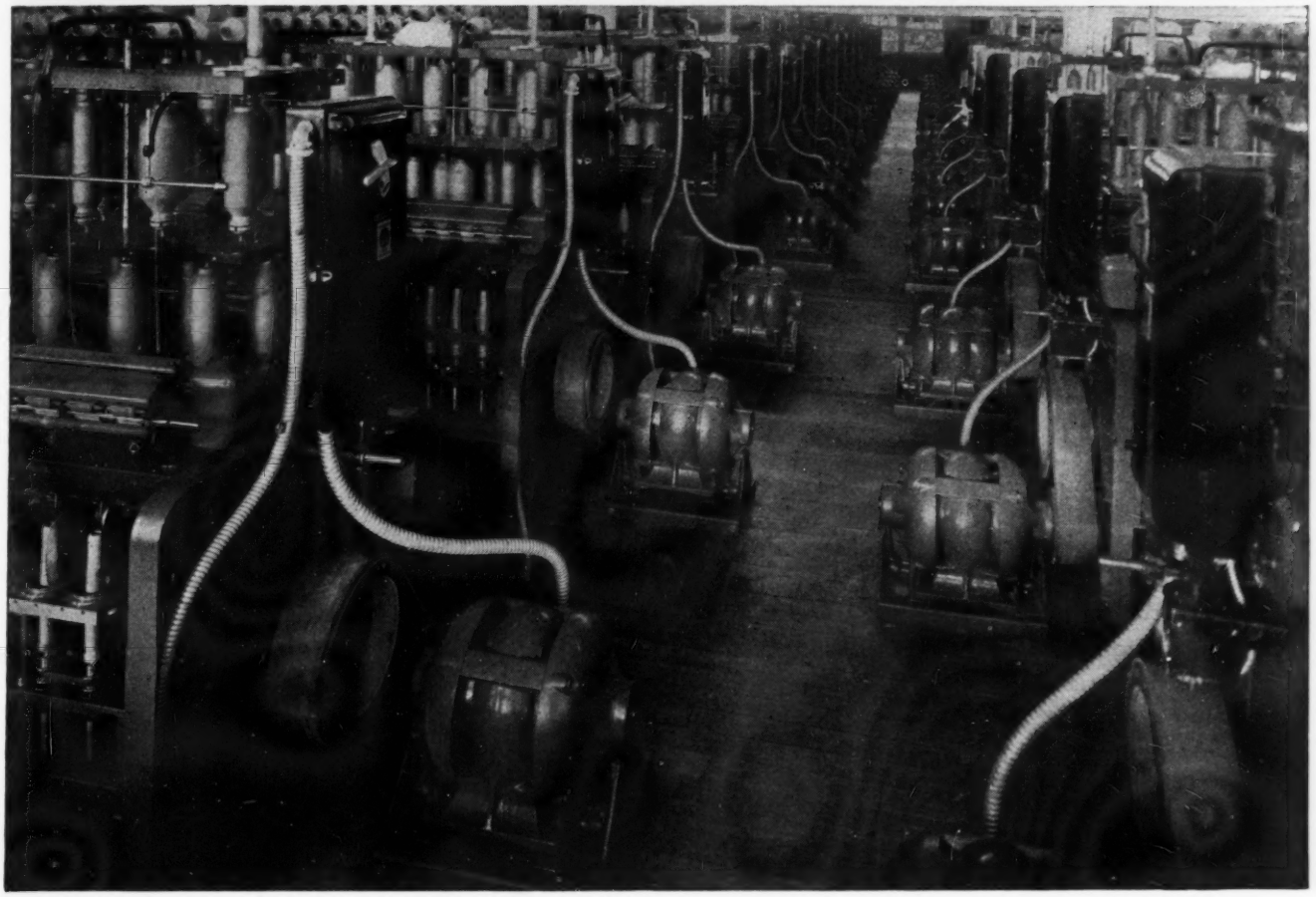
Paid subscriptions, renewals, evidence of reader interest, are among many facts in A. B. C. reports that are definite guides to effective media selection. When you buy space in A. B. C. publications your advertising is safeguarded by audited circulation. Always ask for A. B. C. reports.

COTTON

Member of the Audit Bureau of Circulations ABC *Ask for a copy of our latest A.B.C. report*

A.B.C.=AUDIT BUREAU OF CIRCULATIONS=**FACTS** AS A MEASURE OF CIRCULATION VALUES

Many Mills are Changing Over to **The "Production Drive"**



It doesn't pay any textile mill to produce "seconds" on expensive equipment—nor can it afford to install costly motors unless their maximum efficiency can be utilized. That's why so many mills are changing over to The "PRODUCTION DRIVE."

This scientifically-engineered transmission unit—composed of a *Quality Leather Belt* which has the highest permanent pulling power of any known belting material, and a pivoted motor base which automatically maintains correct belt tension at all times—provides the uniform machine speed so essential in turning out quality textile products and in maintaining peak production.

For a better product, why don't you change over to The "PRODUCTION DRIVE"—already delivering over a million and three-quarters horsepower throughout Industry?

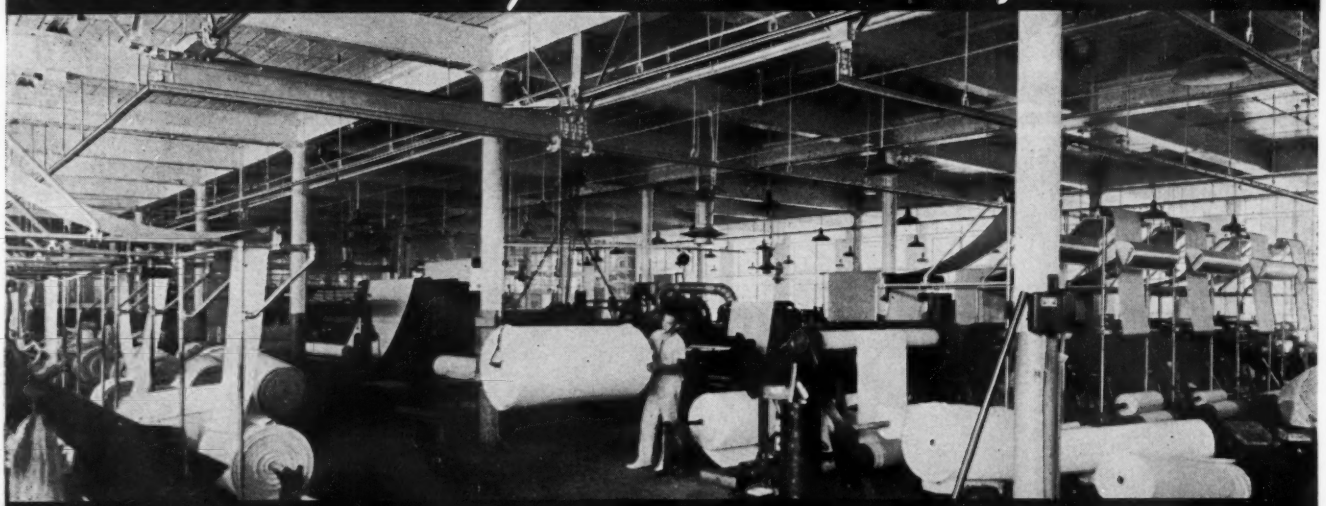
Ask any Leather Belting Manufacturer about results being accomplished in other mills.

AMERICAN LEATHER BELTING ASSOCIATION
53 Park Row, New York, N. Y.

AMERICAN LEATHER BELTING ASSOCIATION — GRIPS LIKE A HAND — RELY ON THE GRIP OF LEATHER — PULLS LIKE A TRACTOR

Rely on **Leather Belting**

Overhead Handling REDUCES Handling Overhead



. . . that's why so many Textile Mills have installed

AMERICAN MONORAIL SYSTEMS

Crane servicing one area latches with spur tracks to other departments.

HANDLING operations in the textile industry through all the various processes make up a large part of the finished product cost. You can save a considerable part of this cost with American MonoRail Overhead Handling Equipment.

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Let an American MonoRail Engineer show you the cost-reducing possibilities and the suprisingly low cost of installation and operation.

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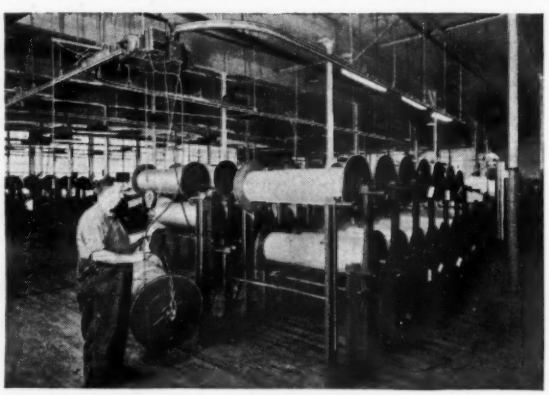
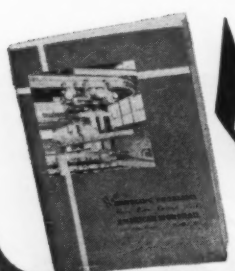


● Simple method for creeling slashers with electric hoist on MonoRail spurs.



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THE AMERICAN MONORAIL CO.

13106 ATHENS AVENUE CLEVELAND, OHIO

AUG 19 1941

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COTTON
SERVING THE
Textile Industries

Volume 105 AUGUST, 1941 Number 8

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quick make-

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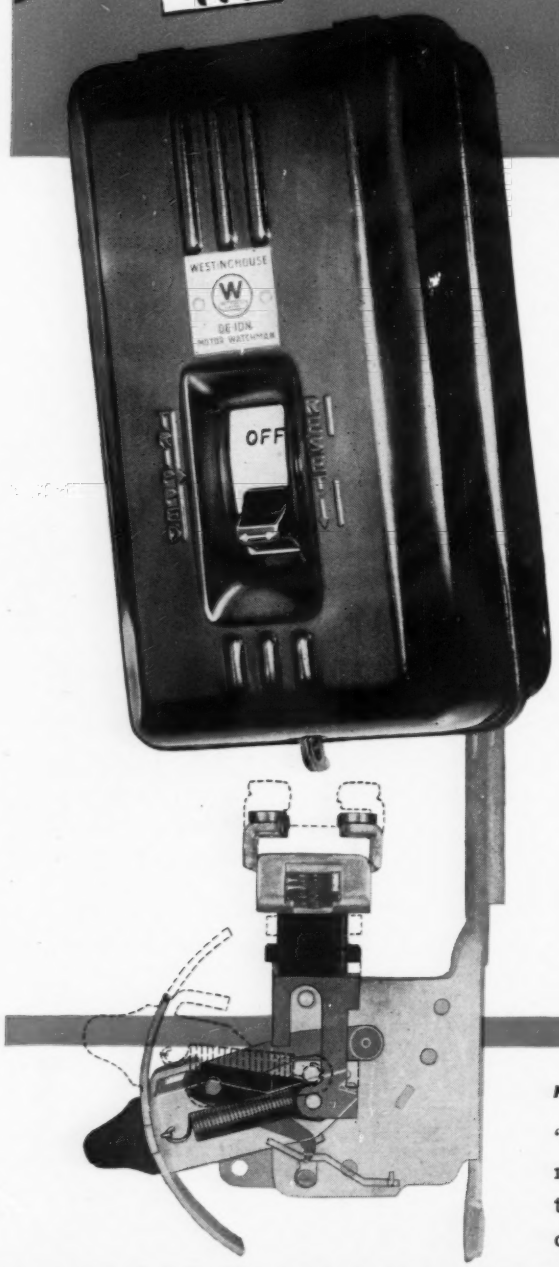


ANOTHER REASON FOR LONGER CONTACT LIFE... CONTACTS CANNOT BE "TEASED"

Quick-break opening of contacts on a manual across-the-line starter is essential to prevent dangerous arcing and burning of contacts. Not so well recognized is the fact that *quick-make* action is also an important factor in long contact life.

If contacts meet slowly, they start to carry full starting current before full contact pressure is reached. They may be "teased"—touched together but not latched, and then allowed to open, causing burning.

The Westinghouse "De-ion" Loom Switch has both positive quick-make and quick-break action to doubly safeguard contacts against burning. Together with "De-ion" Arc Quenchers, Bi-Metal overload protection and interlocking covers, Westinghouse Starters offer longer life and lower maintenance costs with complete safety. It will pay you to investigate. Write Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., Dept. 7-N.

NO DEAD CENTER POSITION... NO "TEASING" OF CONTACTS

"De-ion" Loom Switch toggle operating mechanism and movable contacts. When leverage passes center, spring tension gives the quick-make or quick-break action. Contacts cannot be held in dead center position, or "teased."

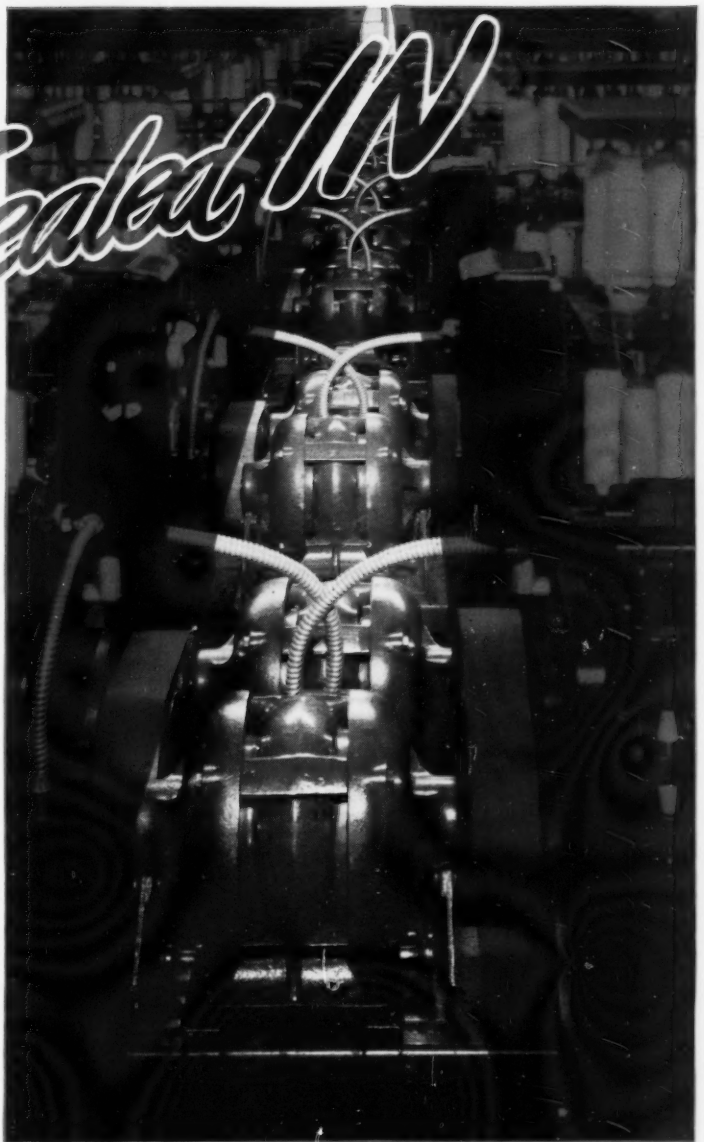
J-21126

Westinghouse

"DE-ION" LOOM SWITCH

Grease Sealed IN

---lint sealed OUT



WESTINGHOUSE LINT-FREE MOTORS WITH SEALED BALL BEARINGS SAVE TIME AND SHUTDOWNS

Grease can't get out — lint can't get in — with the self-sealed ball bearings on Westinghouse Lint-Free Motors. Factory prelubrication eliminates need for month-to-month lubrication and possible over-greasing.

MOTORS STAY CLEAN

Lint-free operation is assured by carefully contoured air passages. Lint goes in, through and out. Highly finished, streamlined windings and internal surfaces offer no opportunity for lint to accumulate and clog motor. Bearing housings are smooth with no projections to catch lint or obstruct air flow.

Westinghouse Lint-Free Textile Motors are designed for individual drives on pickers, roving frames, winders and spinning and twisting frames. Write today for folder DD-3175. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., Dept. 7-N.

Note the large, unobstructed air passages, and the compact construction of the sealed ball bearings in Westinghouse Lint-Free Motors. Westinghouse engineers have taken advantage of every construction detail to make this the cleanest running textile motor available.

Westinghouse
LINT-FREE MOTORS

THE CIBA LABORATORY
Exists to Serve You
Ciba Chemists, Colorists and Service Technicians are ready at all times to co-operate with you in the solution of your problems. Please feel free to call upon them.

INDIGOID VAT COLORS

Modern production methods have raised these reliable, time-tested, vat colors to new standards of excellence. In many instances, where the absolute maximum of vat color fastness is not essential, these Vats of the Indigoid Series will warrant your consideration.

They combine { AVAILABILITY / VERSATILITY / ECONOMY

CIBA	Orange	R
"	Pink	FF
"	"	B
"	Red	3B
"	"	R
"	Scarlet	G
"	Blue	2B
"	"	BR
"	Brown	G
"	Violet	B
"	"	R
Midland Vat	Blue	R

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P. O. BOX 25, STA. C **NEW YORK** GREENWICH & MORTON STS.

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PROVIDENCE *BOSTON • CHICAGO • CIBA CO., LTD., MONTREAL • PHILADELPHIA • CHARLOTTE • SAN FRANCISCO*

SHORTS AND REMNANTS

Old Timer Fans Look Over Ads

OLD-TIMER, who has been contributing to COTTON for, lo, these many years, occasionally bursts forth in his monthly column regarding the advertising pages. As a practical mill man, with many years of experience both as a worker and official, he knows full well the value of the advertising pages.

In the May issue he asked that his readers let him know some of the advertising pages that appealed to them, and comments were received from mills throughout the United States and Canada. Both readers and advertisers will find some of the general comments which accompanied the designation of advertising pages of interest and value. These comments included such as the following:

"Let me say that anyone who skips over the pages of advertising in COTTON is missing an important part of each issue."

". . . If you know what a man likes to look at and put it in the ad he will see it and look at it. I don't know of anything that a man likes to look at better than a woman or a picture of one . . . so I say 'show them what they like to see and they will look at it. Show it to them in the right way and if they need it they will buy it.'"

"I try to look over *all* the advertisements in the magazine every month."

"The highbrows tell us that there are four psychological steps to selling anything and of course advertising is selling on paper. They are: Attention; Interest; Desire; and a Stimulus to Action—getting an order for the article."

"You may remember that I keep a rather complete file index including ads; each issue that I read always has ads which attract my attention."

"I will say that I find advertisements educational and helpful in keeping a plant modern."

"What is an ad? It is the firm who has something to sell, in print. Are all representatives salesmen? No, not all, as they do not have the technique of making the buyer conscious of the fact that it is essential to him to purchase that which the concern advertising has to sell."

Quite a number of specific advertisements were mentioned. Most of these were from the May issue, although one reader went back to January 1941 issue to tell how an advertisement of the STANDARD PRESSED STEEL COMPANY in that number struck him:

"After tracing two pretty bad opener room fires to set-screws that had worked loose on the spike apron doffer in the opening machine, I decided it was time to do something about it besides tell the section man to be sure that the set-screws were tight (after noting that the heads were worn round from too much tightening already.) Turning to the magazine that had helped me solve many tough problems before, I found . . . on page 32 a picture that took my eye. It seemed to me that the knurled point on the 'Unbrako' set-screws was just what I was looking for. After ordering a few and trying them, I found that they were the very thing I had been looking for and so far no more fires have had their origin in this machine."

Some comments on other advertisements, all taken from the May magazine, included the following:

BARBER COLMAN CO.—"So complete it shows part of the machine, truck, the table, and the cheeses and last but certainly not least the pretty girl shown performing her task of changing the cheeses from truck to table. Anyone familiar with the B-C machines knows that this is a perfect ad and anyone familiar with pretty girls knows this one is a beauty;" also "It shows where time is saved with less handling giving girl more time to tend to production while the machine draws the finished work away without any effort on the girl's part;"

E. I. DU PONT DE NEMOURS & CO., INC. (Finishes Division)—"Appealed to me especially because we are contemplating a lot of inside painting and their representative had recommended just what they were advertising—namely, a one-coat job;"

CONTINENTAL-DIAMOND FIBRE CO.—"The picture of the setter, gracefully poised, alert and patiently waiting in the field caught my attention because I like bird dogs and outdoor life. The picture of the roving can aroused my interest because I am interested in textile machinery and auxiliaries;" also "Would indicate that it is well known to the trade and needs only to give a reminder that they are still after business;"

SJOSTROM MACHINE CO.—"The picture of the apron tells the entire story. There is nothing, as I can see it, that conveys information like a good picture. It is worth two or three pages of written explanation;"

BROWN INSTRUMENT CO.—"Have written about size box troubles!"

E. I. DU PONT DE NEMOURS CO., INC. (Fine Chemicals Division)—"Ad on Avitex textile finishing agents good one for my own students;"

MAPLE FLOORING MFG. ASSN.—"It looks nice but should show out under wheels of trucks to show the difference and to show how poor flooring shrinks with time and comes loose from joists causing machine vibration;"

UNIVERSAL WINDING CO.—"Shows how machine is easily operated, without undue exertion, giving picture of product from machine showing compactness and neatness of package;"

TENNESSEE EASTMAN CORP.—"Selected to write for more data as it is almost impossible to put enough data in one ad."

PERMUTIT CO.—"Very good as it explains the benefits and gives comparisons whereby prospective buyer can make a decision whenever similar conditions exist in mill."

HOWARD BROS. MFG. CO.—"Photos showing cross-section of the product and an inside story as to how the product is made are good."

AMERICAN MONORAIL CO.—"I like the part showing how their products function in the various departments."

GOODYEAR TIRE AND RUBBER CO.—"The best one appearing in the magazine. Tells you the kind of pulls the belt is used on, also the tests it has stood, and the machine on which it ran. The novel way the advertisement is pictured is also instructive, as it shows the drive and the figures, etc."

ARMSTRONG CORK CO.—"Six highspots give an answer to the very questions mill men would be expected to ask about this product."

H. W. BUTTERWORTH & SONS CO.—"Good presentation showing a greater production a package dyer can get with their four bank machine;"

JOHNSON BRONZE CO.—"Writing [script type] indicates that they are in the market to supply and satisfy all clients, which is a very good point!"

A. B. CARTER, INC.—"O. K. as it lets the buyer know that the knotter is efficient and saves time for tying and retying knots with the straining of yarn which is quite an item."

◆

Now in the Service

Col. Butterworth

Lt. Leeson

Textile mills, as well as textile machinery and equipment manufacturers have supplied a great deal of man-power already in the current National Defense program. "Cotton, Serving the Textile Industries," takes pleasure in presenting this month the pictures of two prominent figures in textile machinery manufacturing who are recent additions to our armed forces. Col. J. E. Butterworth is now commanding officer at Camp Ritchie, Cascade, Md., has been granted a year's leave of absence as treasurer of H. W. Butterworth & Sons Co., Philadelphia, Pa.

Robert Leeson has resigned as President of Universal Winding Co., Providence, R. I., to take up active service in the U. S. Navy with the rank of Lt. J. G. For other changes in Universal following Mr. Leeson's resignation see page 58.

Another textile equipment manufacturer, Roger W. Cutler, received national recognition in the July 14 issue of "Time" for his work in developing aviators for the Navy at the new Jacksonville airport. Lieut. Commander Cutler is credited with developing a distinctive character for the big air station which cost $25,000,000 and takes 10,000 men to run—and also for the officer aviators being turned out there.

Dixie Ads Win Award

Another of COTTON'S advertisers, Dixie Mercerizing Company, Durene manufacturers, Chattanooga, Tenn., won first award for direct mail and third award for their business paper campaign at a recent meeting of the National Advertising Agency Network. The business paper campaign included advertisements to impress the knitting trade with the advantages of Durene yarn both in running on the knitting machines and in the quality of the finished product.

DEGOMMA LEAVES NO TRACE OF SIZE

To totally desize fabrics, mill after mill is switching to DEGOMMA. With this powerful enzyme, size is completely and rapidly removed. Comparisons show that DEGOMMA has greater and more uniform size liquefying power than any other enzyme offered commercially.

Besides being used for safe and sure total desizing, DEGOMMA is employed to soften printing gums after goods are printed, and to solubilize sizing in certain types of fabrics without total removal of size, thus making possible utilizaton of the converted starches for the final finish.

Whether your problem is the partial or total removal of sizing materials from fabrics, DEGOMMA will solve it satisfactorily.

For detailed recommendations on the use of DEGOMMA on cotton, rayon, cotton-rayon mixtures, and other fabrics write us at once.

DEGOMMA

DESIZING AGENT

RÖHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA, PA.

Manufacturers of Leather and Textile Specialties and Finishes . . Enzymes . . Crystal-Clear Acrylic Plastics . . Synthetic Insecticides . . Fungicides . . and other Industrial Chemicals

COTTON
SERVING THE
Textile Industries

Vol. 105 August, 1941 No. 8

How Not to Stop Inflation

AFTER THE HORSE has broken down the pasture fence and is gorging himself knee-deep in inflationary clover, the Federal Government is reluctantly getting around to talking about locking the stable door. After a multitude of strikes have been settled by raising the wages of a million people, and after wages of a million more have been raised just for fun and without any strikes, there is now some movement in the direction of price fixing. No wage fixing seems to be in view; just price fixing. The idea seems to be to get wages comfortably up; the prices of all agricultural products also comfortably up; give everybody lots of money to spend for things they can't get because factories are busy on defense products, and at the same time keep living costs down by setting prices for finished goods cheap enough to accomplish that laudable purpose.

Certainly, there seems to be some price regulation needed to prevent a repetition of the boom of World War Number One, but trying to regulate exactly the price of every conceivable thing within a narrow profit range is not going to accomplish this desirable end, but will certainly produce a tremendous amount of confusion and a great deal of antagonism at a time when harmony and co-operation are to be desired above everything.

AS AN ILLUSTRATION of what is happening in the textile industry, we can cite the experience of one mill which manufactures mechanical sheeting. On one of their constructions they had orders for several hundred thousand yards at a certain price. Since those orders were taken, the price had gone up about five cents a pound. The price fixed in Washington on that particular construction was about nine cents a pound less than the price at which the mill had sold the goods, and 14 cents less than the current market price of the goods. (The subsequent upward adjustment of the "ceiling" narrowed these margins somewhat, but the principle still applied, as well as the effort at interfering with firm contracts.) Apparently, the current market price was a highly inflationary price; the price at which the mill had sold the goods was probably too high, but the price at which they were ordered to sell the goods was almost certainly too low. That particular mill had to use a longer staple cotton than was generally used in ordinary sheeting. They had to meet breaking strength requirements and certain other specifications not applied to ordinary sheeting. Also, in order to make deliveries they were forced to run overtime at the usual benevolent time and a half provision. The net effect of these divergencies from theoretical practices as considered in Washington resulted in the mill hardly breaking even on the set price. At the same time, certain other mills, peculiarly well equipped to make sheeting of shorter cotton and with less exacting specifications, could possibly make a comfortable profit at the fixed price.

However, the fixing of this price was accompanied by an order to cancel all existing contracts that could not be filled at the fixed price. This mill was therefore in the position of having accepted contracts for several hundred thousand yards of goods at a certain price, and having bought the cotton to make the goods. They are now left high and dry with the cotton in the warehouses, and the contracts for the goods canceled by Government fiat. They don't know exactly what to do. The management feels that it is unlikely that the price fixed on that particular fabric can be made to stick, since it is unreasonably low. They do not therefore wish to accept new contracts at a losing price if, within a few days or weeks, this price may be adjusted. Consequently, they are more or less at a standstill and valuable productive time is being lost.

This is a good illustration of the enormous complexity involved in trying to set prices on everything. The task is hopeless. We believe that a suggestion made in July COTTON would aptly apply to this price setting situation. Instead of attempting the interminable and Herculean task of trying to determine a fair price limit for everything, why would it not be very simple and logical to set the price ceiling on groups of manufacturers so that the ceiling would be high enough unquestionably to permit every manufacturer to make a profit, and then slap a stern excess profits tax on those profits? In that way, the efficient, well-equipped mill which made a big profit would have to pay a big tax which the Federal Government certainly is going to need. The less efficient mill which can make less money would pay less tax, and the mills plagued by a variety of variable specifications which increased their costs would also be protected.

Along with this action would need to come a collateral one, applying the same theory to wages. No halfway measures can keep prices down. It is not only impossible, but ridiculous, to talk about raising wages

and lowering prices by edict. An arrangement of this sort, while unfair, unwise and thoroughly objectionable in the normal times of peace, would seem to be a more logical measure than the imposition upon industry of a vast bureaucratic control of prices down to the most minute detail. Certainly no one who believes in the American System would want to see anything of this sort done in peacetime, but these are not peace times, and we are going to have to do a lot of things that are repugnant in order to avoid a lot of other things still more repugnant.

AS WE HAVE pointed out before, the 40-hour law is just a highway to bankruptcy when the Federal Government is killing two birds with one stone by having to spend nearly twice as much as it should to get work done, and at the same time putting nearly twice as much money into the hands of the buying public as it is desirable that the public should spend. These wage raises and profit increases that have already got into circulation are increasing consumer purchasing at a time when this should be decreased. At the present moment, consumer purchasing is at the highest level in the history of the country, and would continue to get higher if the customers could get the things to purchase.

At the same time that a rigid ceiling is being clamped on manufactured cotton goods, a Congressional spokesman for the cotton farmers refused to consider a ceiling of less than 20 cents a pound for cotton. While there is no immediate likelihood of cotton prices reaching 20 cents a pound, since there is a big stock of cotton on hand, a situation of this sort seems to indicate that what our Government is striving for is a readjustment of prices rather than regulation. Government agencies are trying to determine what their particular pet groups ought to have, and trying to regulate prices to get it for them. Unless this is true, why should the Governmental agencies be trying to pull the prices of wheat, cotton, corn, and other commodities up; while trying to beat down the prices of finished commodities made from these raw materials.

Certainly, price ceilings that discourage manufacturing and reduce production are not wholesome. It seems much better and much simpler to give the manufacturer a chance to operate on a basis where he will not have to be worrying about losing money, and then after he has made the profit, take as much as may be advisable away from him. While this might seem calculated to produce the same results as rigid price fixing in detail, it avoids one important psychological drawback that goes with price fixing. Whenever a price is fixed unreasonably low, there will be countless manufacturers who will count on the price being raised soon, and who will refuse to accept business. There will also be cases where a plant could readily run overtime, but if the fixed price is so low that overtime running with the punitive time and a half overtime rate is unattractive, the plant will probably not run overtime. If the manufacturer knew that there was some profit under any of these circumstances, he would probably go ahead and make it, but if the excess profits tax is high enough there is no incentive to try to make too much, and a fair price ceiling under these circumstances could probably be maintained without much dislocation to industry.

ANOTHER TAX SITUATION of interest to the thousands of salaried people employed as mill executives is the new impending schedule of income tax payments. Here again, it would seem that the excess profits tax principle could be advantageously applied for the duration of the emergency. There are going to be thousands of individuals who are in business and other thousands working for prosperous corporations who will have their earning power sharply increased, while there will be many other thousands who will receive no raises at all. It would seem to be fairer to have an excess income tax to hit hardest those who have had their incomes sharply increased without so severely penalizing those whose income has not increased. A man who has been living on a fixed income for some time might reasonably expect to have to pay more income tax during a national emergency, but a man who has had his salary doubled or trebled on account of the emergency could kick back a substantial percentage of the increase in the form of an excess income tax; this being in the same nature of our recent proposal to tax excessive wages. An independent business man who is not incorporated would thus pay a much higher tax relatively on excess profits than a regularly employed man would pay on the same salary which he has been getting over a period of years.

The whole defense cost has got to be met by work, and the bulk of the people of the United States, so far, do not want to work. They wish to be paid well and work as little as possible, and if they do work they expect to be paid bonus rates for it. This is wrong, and has got to be corrected.

The money can't be squeezed out of industry. Industry is merely the intermediary through which money is transformed into production. The less industry is able to get for the money, the worse the Government has to go in debt. To make industry pay the taxes is merely an indirect way of making the people pay them, but when industry collects the taxes, the people regard these taxes as an increase in the cost of living which immediately calls for increased salaries and wages.

THE LOGICAL ANSWER to that is a consumer sales tax, which is anathema to the politician, but one of the few sensible ways of raising money by taxation. It lays the tax squarely where it is going to be laid in the long run anyway, and it lays it there so that even the dumbest person knows that it is a tax. It would be politically difficult to put a ceiling on wages without the use of a consumer sales tax. Where the wage earner simply sees prices mounting week after week, he does not visualize his paying these prices uncomplainingly as a contribution to national defense. He simply sees that it costs him more to live and he has got to make more money to live as he has been accustomed to living. If the prices didn't go up and he kept on paying the same for all the things he had been buying, but had to put a 10 per cent, or 20 per cent, or 30 per cent sales tax on top of it before he could take the goods home, it would insure a sharp realization of his contribution to the national expenses.

CARD CLOTHING—and How It is Manufactured

By Pheris Wood

THE AIM OF the card clothing manufacturer is to produce a fillet which is absolutely uniform in every particular. The foundation must be uniform in strength, elasticity, and flexibility. Every tooth must have the same height, the same height and angle of knee, the same diameter and strength of wire, and the same sharpness of point. Both the foundation and the wire must pass tests for quality and cannot be used if they fall below the necessarily high standards selected.

It is felt that users of card clothing will be interested in a brief description of how this product is made; and the great care exercised in its manufacture.

Wire. Card wire requires special characteristics, which can be secured only by the greatest care in drawing, annealing, and tempering. It might be asked what degree of hardness card wire should have, but the answer to this question would not be truly informative. Hardness the wire must have, but it must also have a certain toughness as distinct from hardness, and a high standard of resiliency must be obtained. These qualities are required so that the wire will withstand innumerable bendings, within certain limits, without any loss of life. If it were made too hard, it would be too brittle and would eventually break under the strain in carding. If it were made too soft, the teeth would be too easily bent or displaced, and would wear out too quickly. Therefore, a happy medium has to be secured so that the card teeth will withstand the working loads with a minimum of wear and a maximum effective working life.

This condition is secured by lavish care and attention in drawing the wire from about ⅜-inch diameter down to diameters of 9/1000- to 14/1000-inch. The diameters of wire used for the various counts of card clothing are generally as follows:

Counts of Clothing	Diameter of Wire in 1/1000-Inch
90s	13 or 14
100s	13
110s	12
120s	11
130s	10 or 11
140s	9 or 10

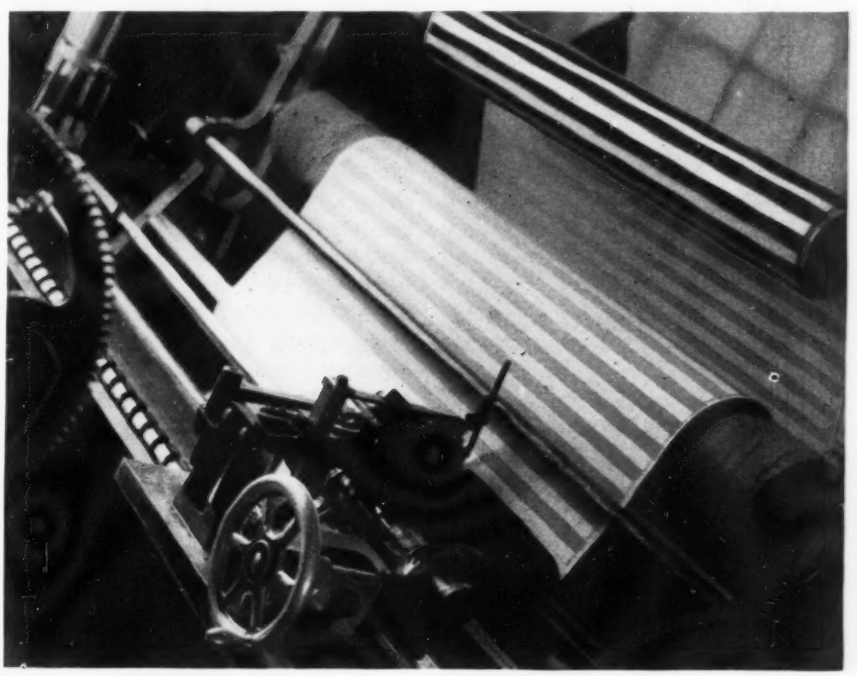
At various stages in the drawing, the wire is passed through annealing ovens. This process restores the nature or life of the wire, or, in other words, heals the strains of drawing. When the requisite fineness is reached, the wire is uniformly hardened and tempered. Examinations and tests are made at each process of drawing, annealing and final tempering.

Foundation. Various types of foundations are used, all built up of layers of cloth, some with a rubber face. Among the types of foundations commonly used for clothing for carding cotton are:

4, 5 or 6 ply cotton cloth,
3 or 4 ply cotton cloth with rubber face,
c.w.c. (cotton, woolen, cotton),
c.c.w.c. (cotton, cotton, woolen, cotton).

Other and more elaborate foundations are used in the construction of special or rigid fillets; also, various combinations are used for clothing for carding woolen and worsted, etc., but the present discussion is confined to clothing for carding cotton only.

The various layers in the foundation are cemented together with a special type of cement or adhesive. This adhesive must hold the layers in a firm compact mass, and, while preventing them from coming apart, must provide flexibility indefinitely. Furthermore, the built-up foundation must be uniform in thickness, strength and elasticity, so that the elongation under stress will be uniform. The cemented



Courtesy, Ashworth Bros., Inc.

An endless machine making top flats for cotton cards

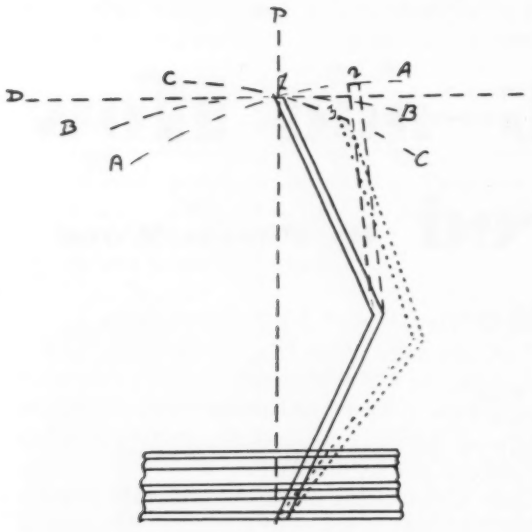


Fig. 1

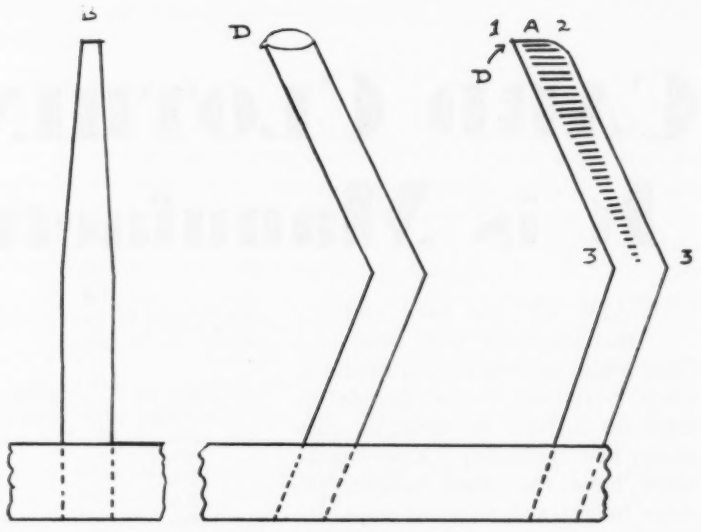


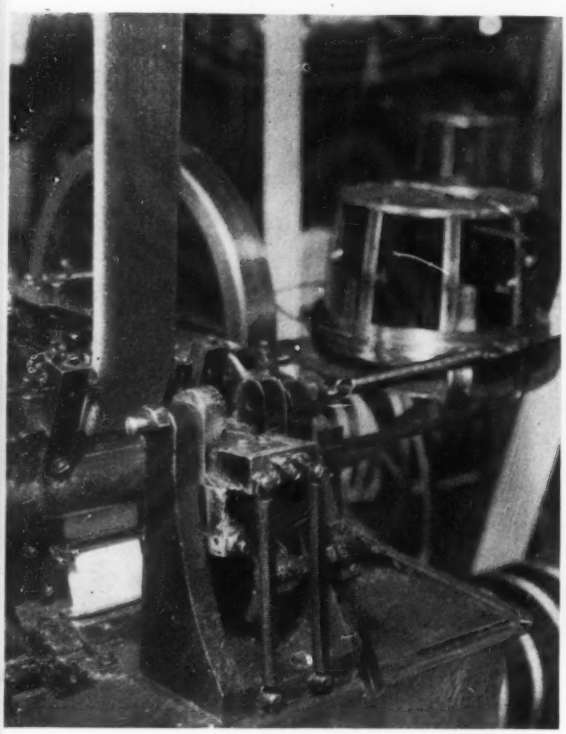
Fig. 2.

layers of cloth are firmly pressed, and eventually cut to the required width.

The object of the rubber face on some fillets, which, incidentally may be natural India rubber (n.i.r.), vulcanized (v.i.r.) or carbonized (c.i.r.) is to improve the elasticity of the foundation and also to form a seal around the wire to prevent moisture seeping into the foundation and causing the wire to rust at the base or crown. Unfortunately, heat is an enemy of rubber, and sooner or later the temperature of the card room, plus the heat caused by the friction in the carding will cause the rubber to perish. Vulcanized or carbonized rubber will generally have a longer life than natural rubber but they are not quite so elastic at first. In any case, the rubber provides protection for some time and is much favored in several countries.

A fillet machine making clothing for a cotton card cylinder.

Courtesy, Ashworth Bros., Inc.



Setting. Card wire setting machines are constructed with watch-like precision. They may be termed the card clothing machine proper, for this is where the foundation and the wire are assembled to form the clothing. The foundation passes through the machine vertically, and its position in the machine is controlled by feeding and traversing cams. The wire is fed into the machine at the side. The cycle of operation is as follows:

A length of wire is fed, cut, and bent into the form of a staple to form the crown and two teeth, meanwhile a pair of sharp prongs have been brought forward to prick two small holes in the foundation; the teeth are inserted into the holes, and a ram on the crown presses them home and holds them firmly in place while two small hooks engage with the teeth and bend them over a bar to form the knee of the teeth, after which the foundation is moved to the correct position for the next pair of teeth. This cycle is performed about 350 times per minute, so that it will be clear that the various gears, cams, levers, etc., must work with perfect and positive precision.

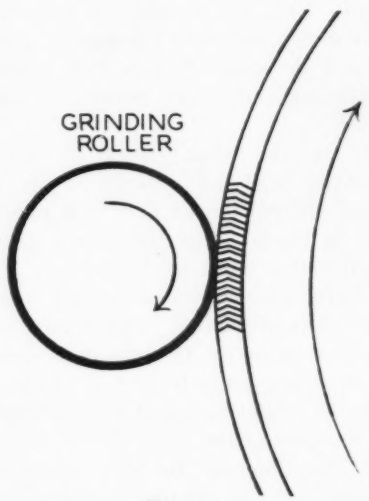


Fig. 3.

The normal position of the tooth of a fillet, is shown at Point 1 in Fig. 1, the point being very slightly in advance of the perpendicular, *P*. In the process of carding, the points vibrate through an arc of a few degrees, due to the strain of combing and straightening the mass of fibers. It is important that the constantly changing position of the point of the tooth shall not unduly affect the setting. The point must not fall away along the arc *C* and assume position 3, as this would be equivalent to widening the setting. Nor must the wire straighten at the knee and allow the point to rise along the arc *A* and assume position 2, as this would cause the teeth of the cylinder and flats to come into contact to the serious detriment of both. As near as possible the point should vibrate along the arc *B*, so

that it will not rise above the line *D-D*, nor fall appreciably below such a line.

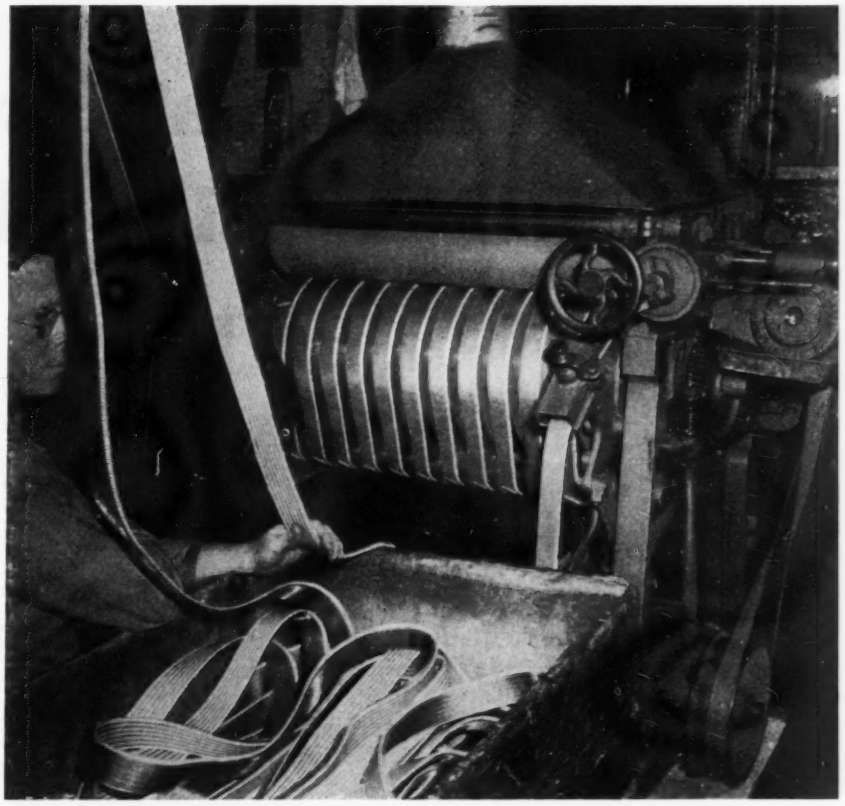
A combination of the following factors is designed to achieve this condition: the strength of the wire, the angle of setting, the angle of the knee, the height of the knee, and the strength and elasticity of the foundation.

Grinding. Following the setting is the grinding process. Although the point has to be fine, it must have on its surface a series of minute scratches or scores. These minute scores are also required along the sides of the wire, while an infinitesimal barb must be produced at the point. See *D* in Fig. 2. This small barb, with the minute scores, assists the wires in taking a grip on the fibers and produces the combing or carding action.

At the point of contact in grinding, the fillet is moving backwards, or in the direction opposite to that in which the teeth point, while the grinding roller is moving forward. Backward and forward are relative terms. (See Fig. 3.) The pressure of the grinder roller depresses the wires slightly and the point produced is somewhat as shown exaggerated at *A* in Fig. 2, with a sharp edge at 1 and a rounded edge at 2.

Side Grinding. At the point, the teeth are made finer than the normal diameter of the wire, and to achieve this, side or plough-grinding is resorted to. In this process, the wires are ground at the sides with a traverse wheel grinder, the head of which is composed of a series of fine emery discs. The amount of side grinding diminishes from the point 1-2 to approximately 3 (Fig. 2) so that the teeth are tapered from just above the knee to the point (see *B*, Fig. 2) This tapered point is made by alternately feeding the discs into the wire and withdrawing them gradually. The point produced is sometimes termed a needle point, but such a term is incorrect as it suggests a round smooth-sided tapering point which would not be useful for carding. What is required is a *carding* point such as has been described and is shown in Fig. 2.

There is a limit to the amount of side grinding permissible. If it is done to excess, the wires will be distorted and weakened and become loosened in the foundation of the fillet. A safe maximum is about 3/1000-inch at the point; that is, a wire of say 12/1000-inch will be side-ground to 9/1000-inch at the point. The small barb described must not be too pronounced or the fibers will be held too firmly and result in choking of the card.



Courtesy, Howard Bros. Mfg. Co.

A view of the process of grinding card clothing

Plough grinding is similar to side grinding, except that in this case a small projection or plough precedes the grinding discs, separating the rows of wires to permit the free entry of the discs. Plough grinding is done on a machine especially made for the purpose, but side grinding is done at the same time as surface grinding, when several of both surface and side grinders may be working on the fillet at the same time.

Polishing. After grinding, the fillet is carefully polished, to remove any excessive barbs and any particles of grinding dust. This is done with burnishing rollers and care must be exercised not to remove the fine scores of scratches on the point and sides of the teeth.

Dressing. Following polishing, the fillet is mounted on a large diameter drum for inspection and any necessary dressing. At this stage, any distorted wires are adjusted, and the fillet is examined to see if all the rows of wires are in perfect line; if not, special hand tools are used and run through the rows while the drum is revolved slowly.

Rolling and Packing. Finally the fillet is rolled, parceled and packed. If the temperature and humidity of all of the rooms in the plant are not controlled, at least this certainly will be the case in the packing department. After rolling on a machine, the fillet is parceled in damp-proof paper. Several fillets may be packed in one tin lined case, or each of the several fillets packed in a case may have its own individual tin lining, and each tin lining is sealed in the dry room. The wood cases are of ample strength so that the fillet should reach the user in the same perfect condition in which they leave the card clothing plant, after which, of course, subsequent care and resultant service are in the hands of the user.

(Further articles by this author, dealing with other phases of carding and card room management, will appear in later issues.)

Enclosed Metal Switchgear for Textile Mills

By M. H. Hobbs
Westinghouse Elec. & Mfg. Co.

THE IMPORTANCE of a reliable and dependable power supply for continuous textile mill operation can hardly be over-emphasized. In the early days of the industry, steam and water power were common, and the electric energy supply might have been considered secondary to the main power. Today every part of most mills depends upon an adequate and reliable electrical supply. Interruptions from any source cannot be tolerated in modern continuous process mills.

Dependability of the switchgear is determined first by the proven reliability of the circuit breaker, and next by the auxiliaries and the structure which incorporates the assembly of switching devices. This short article is concerned only with metal enclosures for such equipment.

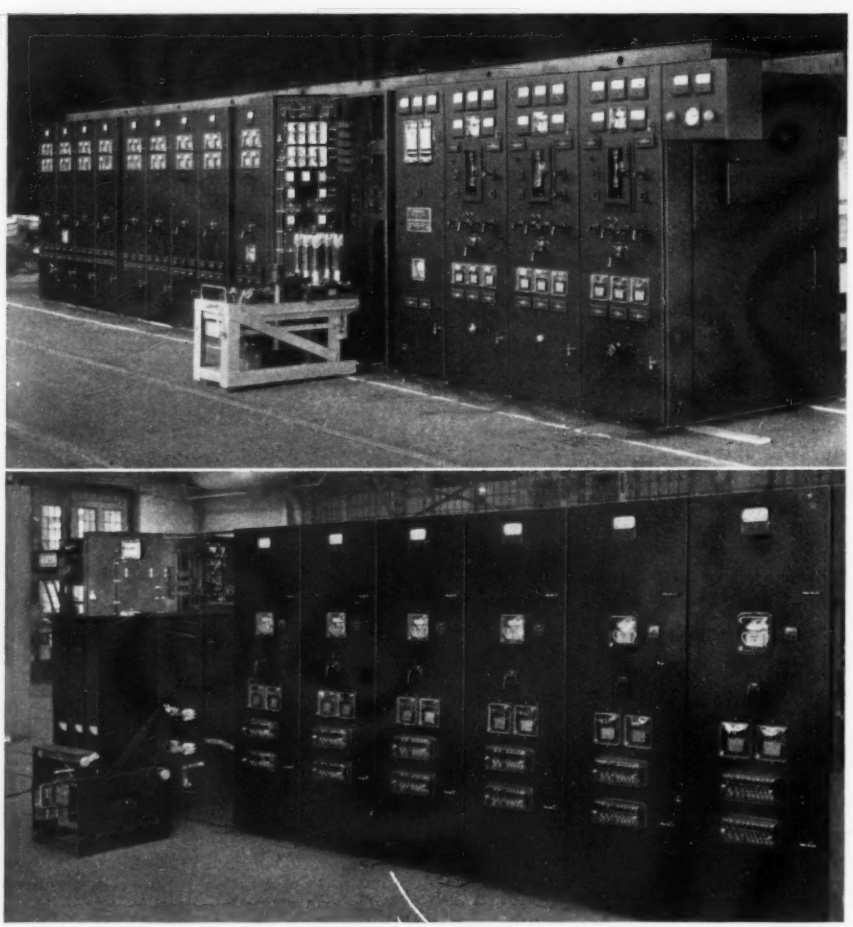
In general, the power supply for a textile mill usually comprises a large number of circuits of relatively low voltage, as the number of large motors which would require higher voltage is limited. Hence a small mill might use only low voltage switchgear, except for an outdoor substation with a transformer, which would be fed from a high tension transmission line or a distribution primary feeder, depending upon the mill's location.

If the mill generates its own power, this would be at distribution and utilization voltage, unless the plant buildings occupied such a wide territory that higher voltage was required for adequate regulation.

For the high voltage switchgear, that is, for 2,300, 6,600, or 13,200 volts, metal-clad switchgear has become practically standard for all large industrial plants. This is manufactured in two general types; vertical drawout and horizontal drawout. The vertical movement to disconnect the breaker is the most suitable for oil circuit breakers, and the horizontal for air type circuit breakers. In both metal-clad designs all buses and connections are completely insulated, and metal isolation is carried out between the three principal elements; breaker, bus, and outgoing or incoming connections, Figures 1 and 2 show typical structures of each type for either generating station or substation.

The selection of one design over another is usually determined by local conditions and the severity of duty on the breaker. Oil circuit breakers have been improved very greatly in recent years, by means of the manufacturers' testing laboratories, and are very reliable. On the other hand, the elimination of oil, and consequently its fire hazard, is very attractive. Also, the reduction in maintenance work, because no oil testing and filtering are required, is desirable.

Hard and fast rules cannot be set down, and it is intended here only to call attention to certain points which influence the application of the equipment.



Top, Fig. 1. Large metal-clad structure with vertical lift oil circuit breakers, one shown withdrawn. Complete flush instruments, relays, and voltage regulators for generating station. Operating voltage 4,000 volts. Below, Fig. 2, metal-clad structure with air circuit breakers for 2,300-volt service. Suitable for distribution substation . . . . . .

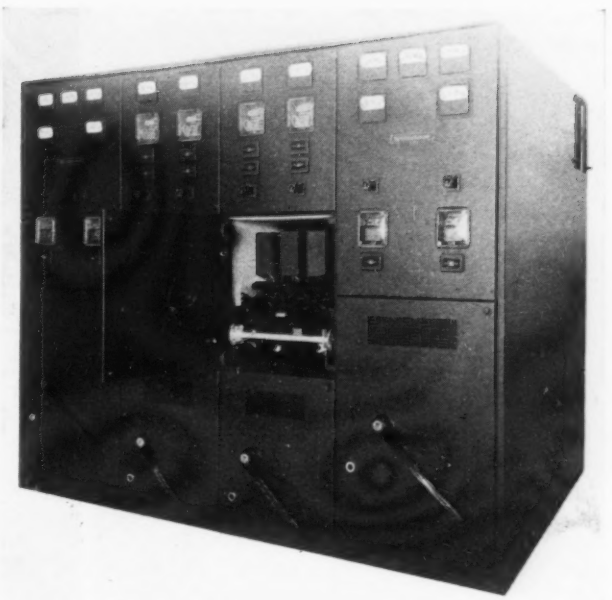
In any case, the advantages of factory-assembled and tested switchgear are obtained, and these are becoming more appreciated year by year as it becomes more difficult to train and maintain expert construction staffs. Not the smallest advantage is the time saved in placing the equipment in service after its installation. A recent example may be cited, even though not a textile mill installation. Complete automatic switchgear together with a transformer and ignition rectifier was in operation 48 hours after its receipt at the property—a coal mine in Pennsylvania. Similar instances are common in comparison with the delays, shortages, and similar interferences where incomplete and unassembled equipment has been purchased.

Another advantage of metal-enclosed switchgear is the space saving. This may appear in several ways. It may permit re-location of switchgear in a more desirable location; it may mean more units in the same space, or it may enable needed increased interrupting capacity breakers to be installed in place of an existing inadequate structure.

A typical example is that of Standard-Coosa-Thatcher at Piedmont, Alabama, described in the June 1940 issue of COTTON. By the installation of a modern metal-enclosed switchboard, additional circuits were accommodated in the same space occupied by the old structure, whereas extension of the old board would have required considerable additional space. Very few textile mills (or other industrial plants which have been operating a number of years) do not need studies of their circuit breaker interrupting duty requirements. It is unfortunate, in too many cases, that a major shutdown is required to call attention to the existing conditions.

It is usual practice in industrial plants to mount the instruments and relays directly upon the metal-clad units. This combination eliminates conduit and control cable runs between the switchgear and a separate board, as well as the testing of these circuits after installation. It also reduces the length of instrument transformer connections and, in general, simplifies both the installation and operation.

Fig. 3. Low voltage (600 volts) switchboard with drawout breakers for heavy duty service. Note relays and instruments. One breaker shown disconnected . . . . . .



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All instruments and relays are mounted and shipped in place after being given a complete operation test with primary current and voltage applied to the instrument transformers. Such a test is fully appreciated only by those who have had to assemble and place in operation in the field separate devices. Sometimes, however, it is desirable to locate the control away from the center of load distribution, in which case a separate switchboard can be provided.

Full advantage of factory assembly is not taken unless several units are shipped in an assembled group with cross connections completed in the factory. This method can be used with any metal-enclosed type of construction and greatly reduces the time and cost of installation. It is recognized that certain locations will not permit more than a single unit to pass through existing doors, and consequently this point is always checked before shipment is made. However, it is advantageous to both the user and the manufacturer to ship the largest structure which can be safely handled.

For the low voltage circuits air circuit breakers are almost universally used. They may be incorporated into a structure having fixed type mounting or drawout type, as shown in Fig. 3, which is suitable for breakers of 50,000, 75,000 and 100,000 amperes interrupting rating at 600 volts. Breakers may be hand or electrically operated and are available in capacities up to 4,000 amperes in the drawout type and 6,000 amperes in the fixed type.

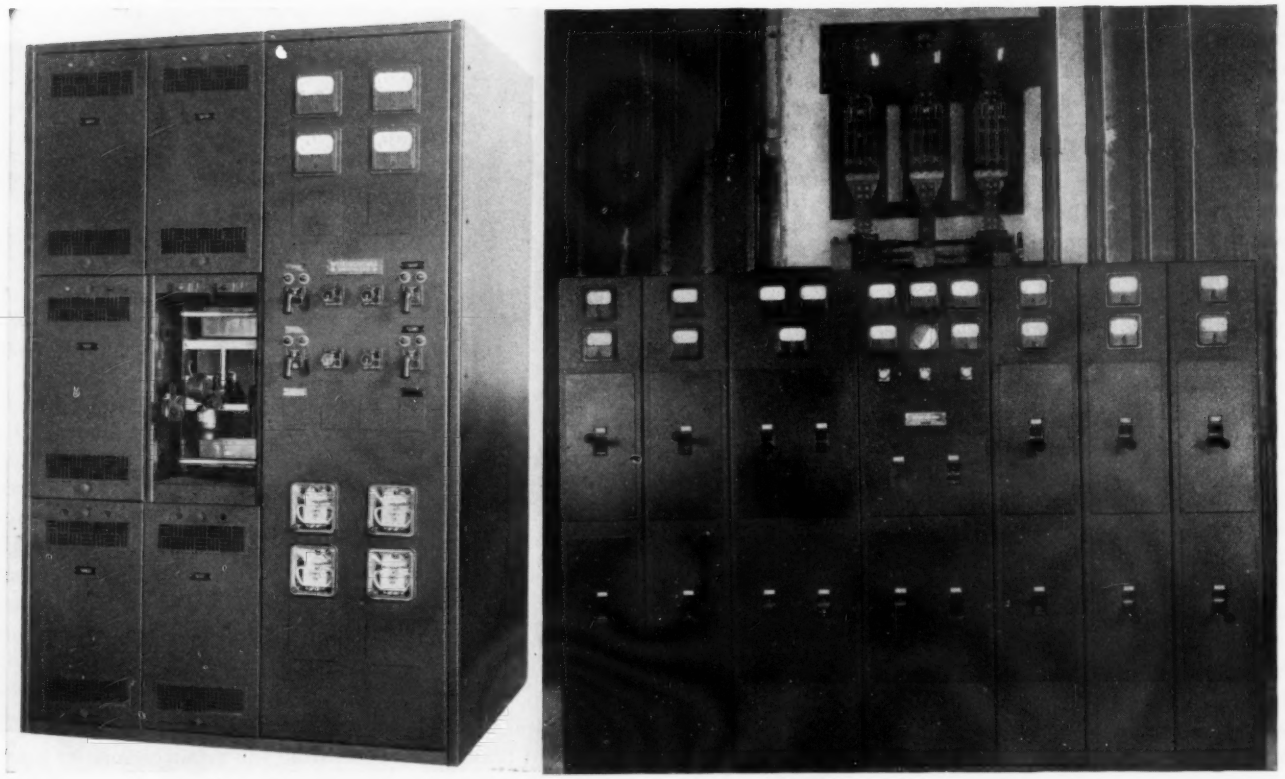
The drawout feature is recommended for at least the main circuits, as the breaker becomes readily accessible for maintenance or adjustment without disturbing other circuits, and a complete breaker unit can replace one requiring major adjustment or repair in a matter of minutes, thus assuring the minimum interruption.

In a large mill, distribution points may be taken care of by structures such as that shown in Fig. 4, which is equivalent in safety and operating features to those previously cited, and differs only in that circuit breakers of smaller size and rating are used. The interrupting ratings are 10,000 and 20,000 amperes at 600 volts, and continuous carrying capacity ratings up to 600 amperes. If higher capacity is required for certain circuits, a combination structure can be readily made, including breakers of the type shown in Fig. 3.

Here, again, breakers of either the fixed or drawout type are available, and the choice should be dictated by the importance of the circuit and the severity of the duty. The breakers in Fig. 4 are drawout type and Fig. 5 shows a similar switchboard with fixed breakers.

For an isolated load, such as a pump circuit, building cost can be saved by mounting the equipment in an outdoor cubicle, many of which have been used.

In conclusion, a brief statement of the features of metal-enclosed switchgear is desirable. These fea-



Left, Fig. 4. Low voltage (600 volts) switchboard with drawout breakers for distribution service requiring small interrupting capacity. Breakers electrically operated with control panel adjacent. Right, Fig. 5, distribution switchboard, at Dallas Mfg. Company, Huntsville, Ala.; metal-enclosed with fixed type air circuit breakers for low voltage.

tures may be listed as follows:

(1) **Safety,** due to complete metal enclosure, relative inaccessibility of devices and conductors when they are energized, and provisions for convenient maintenance.

(2) **Factory Assembly and Test,** with a reduction in engineering and installation work in the field.

(3) **Reliability,** due to the use of highest quality insulation and isolation of various circuits from each other.

(4) **Reduced Maintenance,** on account of complete enclosure and convenient removal of circuit breaker unit.

(5) **Overall Cost Saving,** where all factors of first cost, installation, and operation are taken into account.

That the various features are recognized is shown by the increasing number of new textile mills which have installed metal-enclosed switchgear as well as the older mills which have specified it for replacement of existing inadequate equipment.

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Howe President of Universal Winding Co.

Following the resignation of Robert Leeson to enter active service in the United States Navy (see page 49) Parkman D. Howe has been made president of Universal Winding Company. He has been treasurer for the past 10 years. Robert A. Leeson continues as chairman of the board with supervision of the company's major policies. Edward O. Smith, vice-president, continues as executive head of the export department. Charles L. Bates, who joined the company last fall, is vice-president in charge of domestic sales and engineering policy. Charles H. Carswell, the company's comptroller from 1931 to 1936 and since that time comptroller of the Barber Asphalt Corporation, has rejoined Universal as its treasurer.

Other executives to continue in the work they have been carrying on are: Thomas L. Cotter sales manager; E. Robert Swanson chief engineer; Ralph L. Chisholm, sales engineer and advertising manager; and William A. Ruhl, works manager.

The company announces that its automatic high speed bobbin winder, produced from designs of its engineers, is in successful operation in a number of plants.

The Universal Winding Company is doing its part for the defense program through its Cranston Arms Division. A record has been established in tooling and starting mass production of the Johnson Automatic rifle, bringing the first rifle off the assembly line nine months from scratch. This included the layout and installation of a new and complete manufacturing unit adjoining the company's main plant.

Trade Names "Freed" for Potential Users

Approximately 3,000 trade names which were in use in the fabric, wearing apparel, yarn and thread trades, have been "freed" for adoption by new users, as a result of a periodic clean-up of the files of the trade mark bureau of the National Federation of Textiles, Inc. Every firm which was on record with the bureau (numbering nearly one thousand) was asked to cancel names no longer in use. Approximately half of the freed names had also been registered at the U. S. Patent Office. The names released will be recorded for new users on a first come first served basis, at the prevailing nominal fees of $1.50 per application for the recording of a single name, or $20.00 per book of 25 applications, which may be used as desired.

Some Causes of Broken Filling

By James A. Ward

BROKEN FILLING in a loom is merely a barometer, indicating an unnecessary or misapplied application of force, or an undue strain exerted at some particular point upon the filling. Sometimes it assumes the proportion of a problem, at other times it is easily corrected. When met with in a loom, the broken end should be carefully examined (with the aid of an ordinary counting glass if necessary), to ascertain if it is chafed, cut, or broken. And if the broken end is stretched along the lay as far as it will reach, it will be easier to locate the cause. Some of the causes of broken filling are given as follows:

The Picker: The picker cuts the filling only at the end of its traverse—at the point where the picking stick is arrested by the bumper. This sudden resistance staggering the picker throws it towards the front of the shuttle box, which if not wide enough allows the picker to hit the metal front guard of the box. Should any of the rivets in the picker be raised above the leather surface, and the filling be caught between, it is sure to be cut. Where the rivet is striking the box front it will snow a shiny surface, but if filed below the leather surface with the back of a half-round file, it will remedy this condition. A square or flat file should never be used as the corners cut the leather and injure the picker.

Side Temples: The side temples should have every pin in the rollers at work, and when the rollers are moved in the same direction as the cloth, the pins must *spiral outwards*. If less than the entire temple is gripping the cloth, the pins in the rollers may mark the fabric, ends in the selvage will break out, and the filling is likely to be cut at the edge. A side temple correctly adjusted and functioning properly, should show a distinct outward pull as the cloth passes through. The sides temples' correct position, therefore, is as close to the reed as possible, making allowance for wear in the crank arm, just clear of the shuttle race, and with the entire temple gripping the cloth. If the temple and reed are allowed to touch each other when the loom is running, and the filling gets between, there is nothing to prevent its being cut.

Filling Fork and Grate: This is the only loom part the filling is required to operate, a fact which adds to its importance. The filling, however weak it may be, must raise the filling fork sufficiently to clear the pull-off hammer; there is no getting away from that fact. But when through

faulty adjustments, it is put to an unnecessary strain in order to do this, it just has to break. There are three things that cause the filling to break at or near the fork. (1) Sharp corners on the grate. (2) The fork projecting too far through the grate. (3) A heavy filling fork.

(1) The sharp corners of the grate can easily be removed by the use of emery cloth. (2) The farther the fork projects through the grate, the more likely it will be to break the filling. Unless the fork is too heavy the toes need not extend more than $\frac{3}{8}$-inch beyond the grate in order to have it function correctly. And should trouble be experienced with the loom "slipping-off", this would most likely be due to the time of the hammer, the shape of the toes of the filling fork, or a heavy fork. The toes of the fork should, at the point where the fork and grate meet, be at the same level as the grate. This serves to prevent the filling from riding up the toes of the fork. (3) A heavy filling fork serves no purpose whatsoever, and when filling gives trouble breaking near this point, it should be tested immediately. It is only the work of a moment to remove the fork from the holder, insert the holding pin or a nail in the hole of the fork, and note how far the head drops below its working level on the hammer; if more than $1\frac{1}{2}$ inches, a new fork should be substituted, or some filed off the head of the old one.

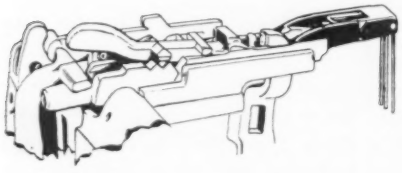
A Packed Selvage: Thoughtlessness on the part of the weaver might pack the reed at the selvage, or, it might be packed to produce a special edge, but with an edge of this kind the side temple should function perfectly (see under side of temples), in order to avoid cut filling at the edge. If trouble with cut filling arises the packed ends in the reed should be scattered, or, the two outside binder ends could be moved one or two dents outward. The empty dents tend to stretch the filling somewhat, and ease the beat-up of the reed.

Shed Closing Early: If the warp sheds are opening and closing too early, this also will cut the filling at the edge. No drastic change is necessary; sometimes a very slight change will remedy it. In trouble of this nature there is no need for the sheds to begin closing until the lay has reached back center; this, and the adjustment of the side temples (as described under side temples) ought to stop the filling from cutting in the edges.

Top Slip: This slip, which is sometimes made of metal, and sometimes of wood, controls the level at which the shuttle and picker meet, and at which the shuttle leaves the shuttle box. If too high, the shuttle will break

the picker hole through to the bottom of the picker. And by allowing the shuttle to rise in the box the filling may get frayed or soiled against the box front. When made of wood, hidden splinters form on the bottom side and cut the filling. This slip should be as close to the picker and shuttle as possible, without binding either.

Excessive Power: The first essential in considering excessive



power is that if two or more shuttles are used in the loom, they should be of equal weight. A heavy shuttle requires less power to throw than a light one; and if a loom is running with one light and one heavy shuttle, this difference in weight must be met by having extra check on the picker stick to prevent the heavy shuttle rebounding in the box. If the loom has too much power and the hand is placed on the reed cap when the loom is running, an easily discernible jerk or drag will be felt as the loom passes the picking point. This may be due to several causes, which do not come within the scope of this article. But when the loom is picking correctly, an even, steady and uninterrupted tap will be felt passing the picking points. A heavy pick sends the filling out of control by ballooning the filling inside the shuttle, and sends it flying around outside. Such is the force of a heavy pick that in some types of looms it will soon soften the yarn on the quill and send it into the cloth in a thick sliver, and will even break the head completely off the quill.

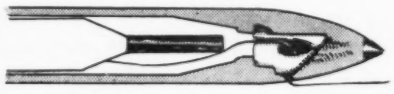
Checking Picker Stick and Shuttle: The checking of the picker stick is a necessity, owing to uneven speed, difference in the shuttles, and variance in the picking mechanism, due to wear and other causes. The shuttle should enter the box with a sharp quick motion (it should never be allowed to sneak in), and brought to rest without any rebound. If difficulty is experienced in doing this the shuttle box may be, and often is, at fault. This can be checked in a moment by pushing the shuttle into the box slowly and carefully by hand, noting the exact point at which the protecting rod begins to rise. From that point the shuttle should have approximately half its length to travel into the box; less than this gives trouble in checking the shuttle; this can be altered by reshaping the binder. Careful checking of the picker stick ought to prevent any rebound of the shuttle in the box, keep the filling from being frayed or soiled, and also avoid a lot of knocking-off.

The Box Front: As the beveled part of the lay is the back, the box front or front guard therefore should be fitted perfectly square to the box plate. The height of its horizontal groove should correspond with that of the shuttle, but be somewhat wider. The edges of this groove are sometimes left sharp enough to cut the filling, and when trouble of this nature arises these edges should be carefully rubbed with emery cloth. This metal front should also be examined for metal blow holes, which can and sometimes do give trouble. Unusual and extreme cases have occurred where it was found necessary to cover the face of the box front with leather. A piece of leather a couple of inches wide is drawn tightly along the face of the guard, carried around the ends, and fastened in front with a piece of light wire or strong cord. But it is just possible that the elimination of one trouble may introduce another, as the oil from the leather may soil the filling. In white goods this can easily be seen, but in gray goods it may pass from the loom unnoticed, and if so it is practically impossible to bleach it out.

Picker Stick: The picker stick should not be allowed to rub along the front of the box plate when throwing the shuttle as this may chafe, soil and even cut the filling. This is particularly true in looms where the picker is fastened to the picker stick and the stick rises from the plate, leaving room for the filling to drop and contact the stick below the picker. This may seem somewhat unusual, but it does occur, and mostly when the bumper is worn, soft, or slack.

Slack Bumper: A slack bumper is one of those little things sometimes overlooked when the loom is breaking the filling, yet a tight bumper may stop the trouble. The tight bumper serves to shorten the stroke of the picker stick, and change the force and position of the blow. Just one of those smaller things which in loom work is of considerable importance.

Shuttle Pins: Inasmuch as all shuttle pins are driven into the shuttle from the front, it is not unusual for them to work out again in the same direction, and when they do the filling gets cut between the head of the pin and the metal of the box front, as in the case of the picker. A shuttle pin giving trouble of this kind if dipped in glue will invariably remain fast. In the case of an older shuttle, a good plan is to plug the hole over the head of the pin with a tight-fitting piece of leather dipped in glue.



Crooked Quills: As part of a system, every quill or bobbin received in the mill should be put through a gauge—just a piece of iron about ⅛-inch thick, a couple of inches wide, and a couple of inches longer than the quill, with the center cut out the exact shape and size of the mills' own standardized quill. If every quill is put through such a gauge before being put into use, it will be found a valuable saver of waste and trouble.

Shuttle Tongue: The Draper loom is of course exempt from the subject matter of the shuttle tongue or spindle, but where it applies, it should not be overlooked or considered of trifling importance when the loom is breaking the filling. If it is loose enough to play about inside the shuttle, it may break the filling anywhere between the quill and the selvage, as the picking of

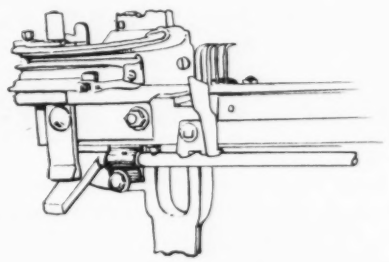
the loom will rock the quill from side to side. Under a condition like this, when the quill is more than half empty, and the filling coming off from the smallest circumference of the cone, it is likely to break as it is pulled around the corner created by the moving quill.

Shuttle Groove: The horizontal groove along the front of the shuttle, corresponding with the one in the box front, was intended to take care of the slack filling caused by the shuttle returning from the shuttle box, but this fails to make allowance for worn parts or faulty box adjustments. For this purpose a deeper and wider groove is necessary to keep the filling from being frayed or soiled when the shuttle is allowed to ride up and down the box front.

Shuttle Eye: The one important thing about the shuttle eye is the position of its inner end. The inner end of this eye must be in a line with the exact center of the quill if broken filling is to be avoided. While a smaller hole in the eye is better, it is not a matter of great importance.

Larger Quill and Shuttle: When changing to the larger shuttle and quill, no difficulty with broken filling should be experienced if the following pointers are taken care of: Have straight bobbins; have the bobbin held perfectly straight and level, as the smallest deviation is sure to give trouble; align the bobbin and the shuttle eye; reduce power when the larger and heavier shuttle is used; if possible, maintain the same relative distance between the end of the quill and the shuttle eye in the larger shuttle as in the smaller shuttle.

Chopped Filling: Chopped filling is not met with as frequently as cut filling, but it is a real problem when it does occur. Chopped filling will occur in a heavy construction fabric even when due regard has been paid to yarn diameters and cloth construction. Only one of the three principal loom movements—beating-up is involved, and our problem of chopped filling is to find the point in this process where the filling



can be driven into the warp with the greatest ease. (1) The smaller the shed the easier it will be to drive in the filling. (2) The lay should be brought to front center and the swords tested with plumbline or level to ascertain if they are truly perpendicular. They should be so. If at this point the bottom of the lay swords is more forward than the top, the fell of the cloth will rise on the face of the reed as the filling is driven home, cutting the weaker parts of the filling. (3) Next, the lay should be turned slowly by hand to back center, watching for the point where the sheds begin to drop or close. If the shed does not begin to close until after the lay has reached back center, the shedding mechanism is too late. It should be early for all cases of chopped filling. In other words, the sheds should begin to close as or slightly before the lay reaches back center. (4) In trouble of this nature it is essential to have the best of side temples, and to make sure they are functioning properly. A side temple that can be adjusted to pull more or less will be found indispensable where chopped filling is giving trouble (5) A high whip roll is absolutely necessary in any effort to ease the beating-up of the filling.

By this time, if these suggestions have been carried out, it will be found necessary to reduce considerably the amount of tension on the warp; that, of course, was the real aim of these five suggestions. In fact, the purpose underlying all efforts to stop the loom from chopping the filling, is to give to the warp the proper amount of tension by loom adjustments, rather than by the easier and quicker method of adding weight to the warp beam tension.

Co-operation Wins

A man who now holds a responsible job as a general foreman in a certain organization tells us this story about his own personal experience.

Several years ago when he was assistant foreman in a certain department, the foreman died unexpectedly. Everyone in the department expected that the assistant foreman would be made foreman, but the general superintendent, feeling that he was too young to be a foreman, transferred another foreman to the job. His first reaction to the disappointment was one of bitterness and jealousy toward the man who had been given the job that he thought he should have had.

Before acting on these jealous impulses, he began to think over the question about what was to be gained by bucking the new foreman. He decided that his own future would be better assured if he did everything he could to help the new foreman make good, so that he might be promoted and still get the foremanship job.

So he licked his jealousy and worked harder than ever to help the new foreman make the department a success. Within a year the foreman was transferred to another department and he recommended the assistant foreman so highly that the general superintendent put him in charge of the department.

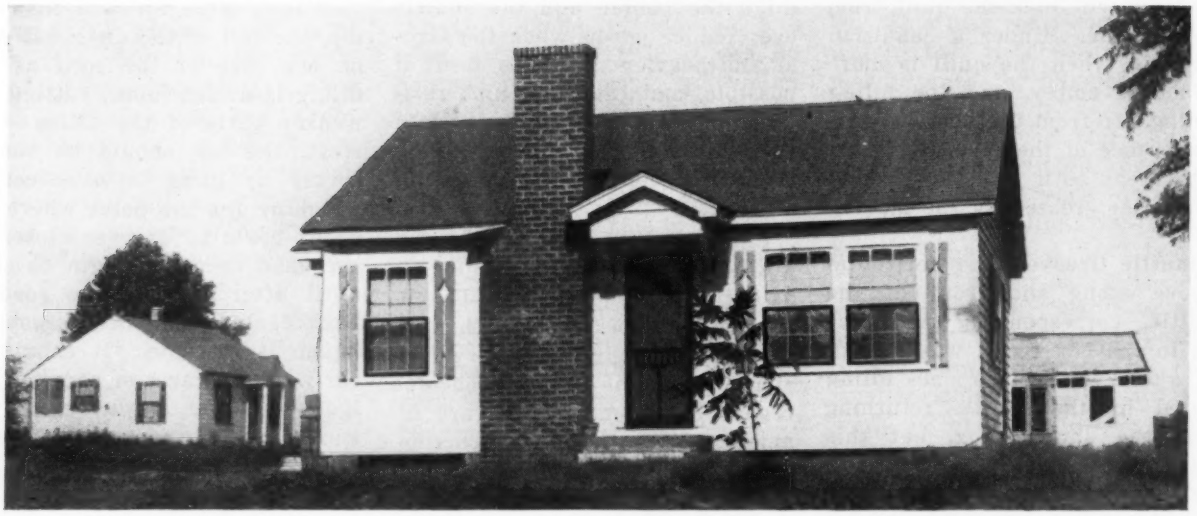
Confidence in the Boss

What are you going to do to win the confidence of your men? Do you think they feel comfortable with you as their boss?

Ask any man to name the three most agreeable and the three most disagreeable factors connected with his job, and he is certain to name his supervisor, either as an agreeable or a disagreeable factor.

We can't be careless about little things in our relations with our men and still expect them to have confidence in us when it comes to the big, important things. Any man feels more comfortable on his job and more willing to do a good day's work if he has confidence in the fairness, friendliness, and impartiality of the man above him.

—"Management Information", Elliott Service Co., Inc.

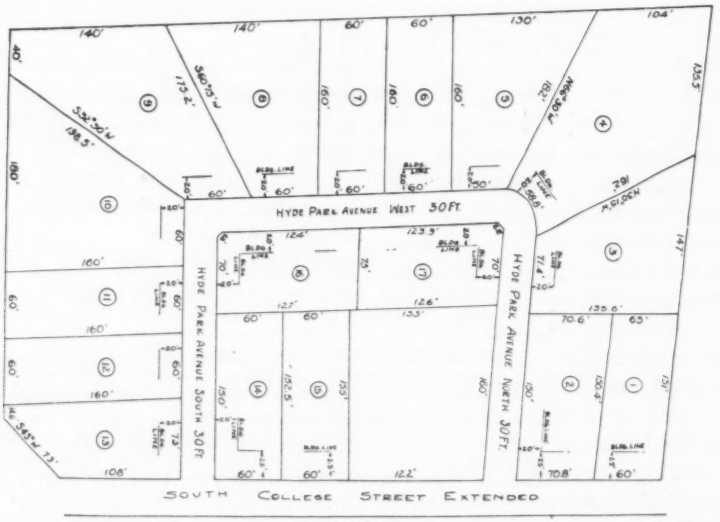


Some of the homes erected in the new sub-division at Hyde Park Mills, Inc.

Mill Develops Sub-Division for Additional Employees

AT THE PRESENT TIME, with the increase in production and the necessity for many mills to go onto the third shift basis, the problem of housing the employees has become acute. This is not only true of the textile industry, but of many defense industries in districts where property owners are raising the cost of rents. Management of industries in such districts may be interested in what one textile plant is doing to solve the problem of housing its employees.

Hyde Park Mills, Inc., Covington, Tenn., had approximately enough village homes to provide housing for the operatives on two shifts, but when the mill began running three shifts the village accommodations became crowded and many of the employees were not able to obtain living quarters at rents which they felt they could afford to pay. The employees were earning in excess of what they had been accustomed to, but felt that instead of increasing their rentals they should make an investment with their additional income.



Plan of sub-division at Hyde Park Mills, Inc., showing arrangement and dimensions of the individual building lots . . . . . .

To meet the problem of living quarters, and to permit their employees to better themselves, the mill set aside a plot of five acres which was ideal for sub-division, dividing the acreage up into 17 lots and leaving one large lot in the plot for a park and playground. Deeds were drawn for each of the lots and they were offered to those employees who were interested in building a home, the price of the lots being set at $50. This was on the condition that the employees began building a house within 60 days after purchasing the lot, but the price of the lot was to be paid for only after they had completed payments on the home.

The company undertook to work out a plan with the REF for putting in the necessary lines for electric power, and also went to the expense of installing a water main, with the understanding that water will be furnished to the houses so long as they remain in the hands of the employees.

A local bank was interested in the project and agreed to finance the construction of the homes, at a very nominal rate of interest, and it has been worked out so that the homes can be paid for within three years, at a cost of not more than $25 per month. More than one lumber concern bid on the contracts

for building and the cost of the houses was figured very closely, ranging between $650 and $800 for homes of three and four rooms with bath.

The streets in the sub-division were dedicated to the county and they were accepted by the county highway commission, which agreed to build and maintain them. Careful restrictions were drawn up for the plot so that home-owners would be completely protected, the restrictions containing such clauses as (1) all lots to be residential and shall not be re-subdivided (2) only those of Caucasian race permitted (3) no noxious trade or activity permitted (4) no dwelling to cost less than $350, etc.

At the present time eleven houses have been constructed and two other lots have been selected by the employees for building. It is expected that all 17 lots will be occupied by the fall.

Plans and Committees for Pinehurst Convention of A.A.T.C.C. Announced

The special session devoted to technical papers presented by the several sections of the organization, which was the highlight of the annual meeting of the American Association of Textile Chemists & Colorists in New York last October, will be repeated at this year's convention, to be held at the Carolina Hotel, Pinehurst, N. C., October 31-November 1. Kenneth H. Barnard, chief chemist of Pacific Mills, Lawrence, Mass., who is chairman of the technical program committee, announces that plans for this feature are practically complete.

General plans and committee personnel for the annual national convention have been announced by Arthur R. Thompson, Jr., of Ciba Co., Inc., Charlotte, N. C., publicity chairman for the Piedmont section of the association which is the host section for the convention.

The convention, which will attract about 700 textile technicians from all branches of the textile industry throughout the country, will open with registration on Friday morning, October 31. Friday afternoon will be devoted to the sectional paper contest, in which a representative of each of the society's eight active sections will deliver a technical paper, these to be judged by a committte and prizes awarded for the best three.

On Friday evening a program of entertainment will be presented under the auspices of the Piedmont section.

Two simultaneous technical sessions will be held on Saturday morning, November 1, with golf, tennis, skeet shooting, bingo, bridge and sight-seeing trips on Saturday afternoon. The convention will conclude with the annual banquet on Saturday evening.

Samuel L. Hayes, southern manager of Ciba Co., Inc., Charlotte, N. C., is general chairman in charge of convention arrangements. L. M. Boyd, of Scholler Bros., Inc., Salisbury, N. C., is chairman of the Piedmont section.

Mr. Hayes

Mr. Quern

Requests for hotel reservations should be made direct to D. Stewart Quern, 1930 Harris Road, Charlotte, N. C., who is chairman of the reservations committee.

Following is the personnel of the general convention committee, with individual chairmanships assigned as indicated:

Samuel L. Hayes, chairman; L. M. Boyd (entertainment); D. Stewart Quern, Becco Sales Co. (reservations); T. W. Church, Jr., Highland Park Mfg. Co. (finance); R. D. Howerton, Calco Chemical Division, American Cyanamid Co. (registrations); A. Henry Gaede, Laurel Soap Mfg. Co.; and H. E. Keifer, Jr., Ware Shoals Mfg. Co.

In addition to Messrs. Boyd, Quern, Church, Thompson, and Howerton, Mr. Hayes has appointed the following committee chairmen: Golf, J. D. Sandridge, E. I. duPont deNemours & Co.; speakers, D. C. Newman, E. I. duPont de Nemours & Co.; skeet contest, Joe L. Moore, Calco Chemical Division, American Cyanamid Co.; and, reception and information, Robert A. Bruce, Amalgamated Chemical Corp.

Council-Institute Plan 1941 Cotton Xmas Observance

Announcing the inauguration of plans for the third annual observance of "Cotton Christmas," the National Cotton Council and Cotton-Textile Institute forecast marked shortages in many articles accepted as standard Christmas gifts. The Council-Institute said that cotton gift articles would be one of the few classes of merchandise in which there would be no shortage.

"More than ever before, this year's Cotton Christmas observance will be a 'natural' promotion for stores in every part of the nation," a spokesman of the two sponsoring organizations said. "Accelerated national defense production and consequent broadening of defense priorities will result in shortages in many commodities heretofore used in gift articles.

"One great American commodity in which there will be no shortage is cotton. When making purchases the consumer should buy articles which will in no means hamper or slow down the defense program. With huge reserve stocks available, cotton stands almost alone in this category."

The 1941 Cotton Christmas program will be broader in scope than any previously undertaken, it was said. Cooperation of large merchandising agencies and national advertising services has already been pledged on an even larger scale than in 1940.

Plans now under consideration by the Council and Institute call for participation by merchants and consumers. newspapers, radio stations, banks and other organizations, outdoor poster companies, theaters, civic clubs, chambers of commerce and home demonstration and county agents.

Key chambers of commerce, merchants' associations and individuals over the cotton belt are being contacted at present prior to a general circularization on the Cotton Christmas program during the fall.

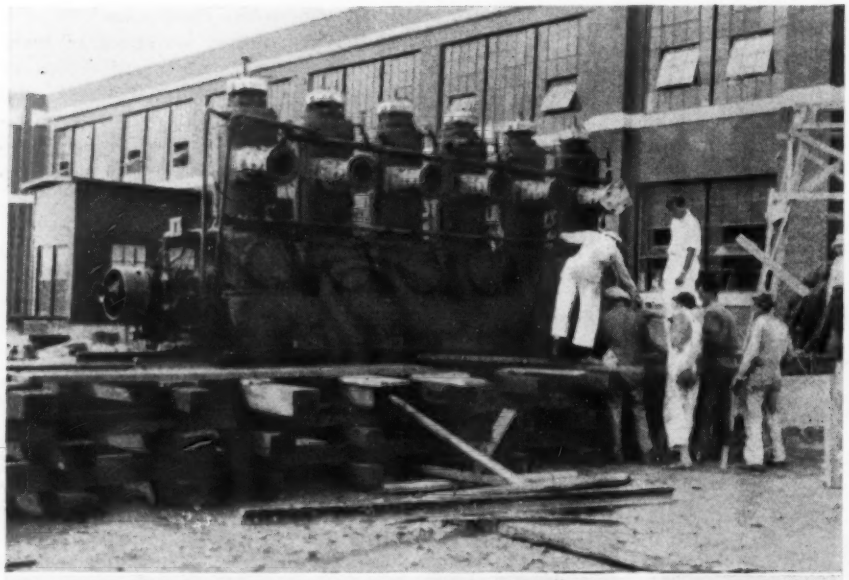
What You Can Do

There are a number of specific things which you as a supervisor can do to furnish a real incentive to your young employees. Here are several suggestions:

1. When better jobs open up promote from within.
2. Show a personal interest in the progress of each young employee.
3. Be ready to share your knowledge freely with him.
4. Don't "look down" on young people—you were a cub once, yourself.
5. Give young employees as much chance to learn new jobs as possible.
6. Show appreciation. Give credit. and praise when it is deserved.

Young people are flattered by having an older person—particularly the boss—show a personal interest in their development. You have an unexcelled opportunity to reach the hearts of your young employees and inspire them to effective improvement. — *"Management Information", Elliott Service*

Mill Installs Diesels to Augment Power Supply under Curtailment



● *Many a textile plant in the lower South has been moved into considering auxiliary and supplementary power equipment as a result of the curtailment required this summer by shortage of hydro-electric power supply due to the unprecedented drouth, a concurrent exceptional demand, and the necessity to utilize much of the available power to operate defense industries in the district.*

The above photographs illustrate what one mill—Chicopee Mfg. Corp., at Gainesville, Ga.—did about it. James C. Edwards, Jr., the master mechanic at this plant, toured the South and Southwest, seeking some immediately-available Diesel engines, and found two in Tulsa, Okla. These reached Gainesville on July 7, and were placed in operation on July 21. This plant's normal power requirements are about 2,400 k.w. The two Diesels—200 k.w. each—thus will supply about one-sixth of the total load.

The two Diesels were mounted on concrete platforms adjacent to the main plant in the mill yard.

The top photograph shows Master Mechanic Edwards supervising the placing of one of the units. The oil storage tanks, shown below, were available in the mill village, having previously been used in home heating plants recently converted to coal stokers.

The Georgia Power Company removed the curtailment on power during the month of August, just about as some mills were getting their auxiliary power equipment into operation. Generally, they were relieved, but glad to have this "insurance" in case the curtailment program is resumed in the fall, as some feel will be necessary.

Plans of Co-ordinated Research Organizations

The new working arrangement between the Textile Foundation and the U. S. Institute for Textile Research is actually in operation. Under the direction of Edward T. Pickard, now joint executive officer of the Foundation and the Institute, plans are being laid for the aggressive prosecution of a real research program. Mr. Pickard's headquarters are at 10 East 40th St., New York City.

Latest developments include:

1. Fessenden S. Blanchard, of Pacific Mills, newly-elected president of the U. S. Institute for Textile Research, has appointed as a steering committee for the Institute the special committee which developed the plan, composed of Mr. Blanchard, Mr. Pickard, and Dr. Robert E. Rose, of E. I. du Pont de Nemours & Co., a vice-president of the Institute; Dr. Harold DeWitt Smith, of A. M. Tenney Associates, treasurer of the Institute, and Douglas G. Woolf, editor of *Textile World*. This committee will attempt to work out a long-run research program on which suggestions from leaders of the industry will be asked.

Co-operating with the steering committee, on all matters affecting both the Institute and the Foundation, will be a special committee of the latter composed of Franklin W. Hobbs, president of Arlington Mills and chairman of the board of directors of the Textile Foundation; and Frank D. Cheney, of Cheney Bros., and Donald Comer, of Avondale Mills of Alabama, both also directors of the Foundation.

2. A Committee on Publications and Publicity has been appointed consisting of Douglas G. Woolf, editor of *Textile World*, chairman; Earl Heard, dean of the Philadelphia Textile School; Dr. Louis A. Olney, of Lowell Textile Institute; Dr. E. R. Schwarz, of Massachusetts Institute of Technology; and Stanley B. Hunt, of the Textile Economics Bureau. This committee will not only decide the form of the organ which will replace the bulletin *Textile Research* at the end of the present fiscal year, but will also be responsible for the publicity and promotional program reflecting to the industry at large the research accomplishments of both the Institute and the Foundation.

3. The Research Council of the Foundation, under the chairmanship of Dr. W. D. Appel, of the National Bureau of Standards, is working closely with the Steering Committee in the development of long-range research plans.

It is hoped that a definite program covering all these points will be in shape for submission to the members at the annual meeting in November.

Personnel Requirements of a Textile Testing Laboratory

By Henry D. Evans
Pepperell Mfg. Co., Biddeford, Maine

"A MILL LABORATORY is not simply a place where analytical work is performed on materials as an end in itself, but it is rather a place where every possible assistance must be given to the entire mill organization in maintaining and, wherever possible, bettering the products that are giving us our means of livelihood," it was stated by Henry D. Evans, of the Biddeford Division of the Pepperell Mfg. Co., speaking on "The Function of a Testing Laboratory in a Textile Mill", before a recent meeting of the American Association of Textile Technologists.

In his talk Mr. Evans discussed the factors which lead to the establishment of testing laboratories within textile mills. The growing importance of these laboratories and the various phases of their operation as well as their equipment was discussed. Of particular interest was Mr. Evans' discussion of the personnel most desirable for a mill testing laboratory. In this connection he said in part:

"A laboratory consists of the human material of its personnel, and of the inanimate instruments operated by them. Very much of the work of a mill laboratory must, of necessity, be routine in its nature. Work of this kind requires, on the part of the operative, careful training in the particular operations which he or she is required to perform, high accuracy in the performance of these operations and, on account of constant repetition of the operation, a high degree of patience and not too much imagination. There must, however, be enough nimbleness of mind so that any result out of the ordinary is at once noted and is reported as soon as noticed, as much of the value of this sort of testing comes from detecting unusual conditions at their start so as to effect correction before much of such work gets actually into process. For the types of routine work involving testing of rovings, yarns and cloths by physical methods, and on plain cloth analyses, I prefer not trained laboratory school operatives, but a normally bright girl of high school education. Such a person can be broken into exact required routine without having to break down habits of work acquired under other methods of instruction.

"For routine work involving chemical analysis, I prefer men from trade high schools or junior colleges. Such men have gone far enough in their studies to grasp basic analytic procedures involved in general analysis, but have not reached the point where they are prepared to argue over the importance of a sixth decimal place figure. They can be quickly trained to handle large numbers of routine tests in groups as a matter of course. Too many of our textile school and college graduates have had drilled into them a definite technique for the performance of a definite analytical procedure. Give such a man a large enough sample, only one sample and unlimited time, and he will give you as fine an analytical result as you can ask for. Give him a dozen samples, no excess material in case of accident or error, and a definite time limit within which the work must be done, and he is lost. Try to show him a system to handle such a job, and you have to break down objection after objection to each detail different to the one he has been trained in, and even then he does the job your way for a long time only because you are the boss.

"The other man knows the basic principles of manipulative processes, the basis of elemental chemical principles, but has not become fixed in his outlook on the exact methods of applying these principles in practice. He is willing to adopt a reasonable suggested method of procedure at once and without mental opposition, and falls into the swing of group analysis because he has not become rooted in the straightened processes of individual analysis. Not hidebound, he sees new methods and short-cuts and is not afraid to mention them on the chance that they may make him appear foolish at times.

"In addition to the above operatives involved in the strictly routine manipulative processes of laboratory procedure, there is needed a man trained in the theory of all of the above physical and chemical procedures, in the interpretation of the results of these procedures into mill operations, and, of at least equal importance, of such knowledge of human nature and personal adaptability and manufacturing knowledge in his mill's particular lines as to make his contacts with the various overseers both personally friendly and mutually trustful. To gain these latter essentials, I firmly believe that the head of a textile mill laboratory should have had actual mill experience in the operation of at least one department broad enough to have resulted in his having become overseer of the department. To secure the best of cooperation between laboratory and operating departments nothing helps so much as the ability to understand the viewpoint of the operator. This cannot be learned from books but only from experience."

Testing as described by Mr. Evans at the Pepperell plants consisted of more than just post-testing or trouble shooting. An important phase of the work is the control exercised and standards maintained by checking the product all along the line. This starts by examination of the fibers used and other raw materials. Through the yarn making processes the sliver, roving and yarns are checked. Twice a week all widths of all styles from the looms come to the laboratory in the grey for a check for width, weight, sley, pick, breaks and size content. After every loom change the resulting loom product is checked before the loom is released for production. On blends weekly checks are run on fiber content. Finished goods are checked and with the growth of informative labeling the laboratory work ties in closely with the merchandise data.

Snapshots at annual outing of Piedmont Section, A. A. T. C. C. at Myrtle Beach

● Some informal snapshots by "Cotton" at the annual outing of the Piedmont Section of the American Association of Textile Chemists & Colorists, at Myrtle Beach, S. C., June 27-28. There was no formal program, the affair being entirely a social outing, with a golf tournament, bridge party, and other entertainment. **L. M. Boyd**, of Scholler Bros., is chairman of the section.

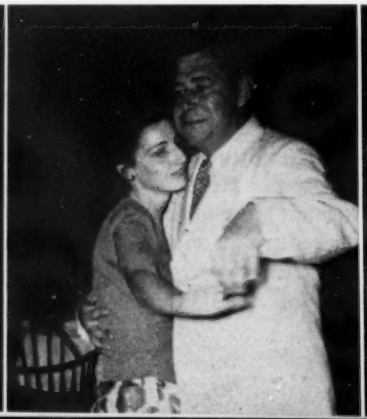
Above, top row, left to right: **Samuel L. Hayes**, of Ciba Co., who is general chairman for the annual national convention at Pinehurst, October 31-Nov. 1; **Mrs. L. M. Boyd**; **Mr. Boyd**; **Robert D. Howerton**, of Calco, treasurer of the section; **Mrs. Howerton**; **D. Stewart Quern**, of Becco, treasurer of the section; **T. W. Church, Jr.**, of Highland Park Mfg. Co., vice chairman of the section; and **Mrs. Church.**

Second row: **Mrs. Erwin G. Walker**; **R. E. Sumner**, of Calco, **Mrs. Joe. L. Moore**; **Mrs. T. Larson** receiving her bridge prize from **Mrs. A. Henry Gaede**; **Virgil Garrett**, of High Point, receiving his golf prize from **Peter S. Gilchrist, Jr.**

Third row: **E. Niessen**, and **Judd Miller**, of Quaker Chemical; **Mr. Holland**, of Cannon Mills; **William Hanes**, of Hercules, and **J. J. Murphey**, of Quaker Chemical; **Mrs. Ira L. Griffin, Ira L. Griffin**, of Stein Hall, **Mrs. T. C. Davis** and **Mr. Davis.**

Bottom row: **Wm. A. Wolhar**, of Roanoke Rapids; **Mrs. Irving J. Boyce**, of Charlotte, **Gordon E. Berkstresser**, of Roanoke Rapids, and **Mrs. Wm. A. Wolhar**; **Mrs. Walter F. Fancourt, III**, of Philadelphia, **Joe R. Morton**, of Greensboro, **Mrs. H. E. Kiefer**, and **H. E. Kiefer**, of Ware Shoals, councilor of the section.

Below: Four gay couples on the dance floor at Myrtle Beach. Left to right: **Mrs. Arthur R. Thompson, Jr.**, of Charlotte, and **S. I. Parker**, of Ciba, New York; **Mrs. C. W. Sampson**, of Charlotte, and **Norman A. Ruston**, of Cincinnati; Mr. and **Mrs. A. Henry Gaede**, of Charlotte; and **Mr.** and **Mrs. Thomas R. Smith**, of Albemarle. Mr. Smith is vice-president of A.A.T.C.C.



Sale Yarns Lead all Products in Amount of Cotton Consumed

Summary of consumption by products manufactured in record-breaking six-months; 5,205,260 bales used

THE NEW FORM of reporting cotton consumption, by classes of manufactured products made, reveals some extremely interesting information. Previously, the monthly reports of the Bureau of the Census showed only the consumption, by states, in total bales. Earlier this year, the Bureau began reporting the consumption of cotton in bales for each of several major product classifications. The first release in this form covered the last six months of 1940. This table was published in full on page 72 of the April issue of COTTON.

For each month of the current year, the Bureau has continued the report of cotton consumption by classes of products manufactured, and shows this by geographical districts, and we have consolidated these reports, for the first six months of 1941, and present here, the total consumption of bales, for this six-months period, in the Cotton-Growing States, New England, and All Other States, as well as for the entire country. This table shows the proportion of the country's total consumption for the period that went into the 12 major product groups; and gives this same figure, on each major product, for each of the three sections of the country, and the percentage of each class of production produced in the South, New England, and the remainder of the country.

The table shows that the country's total consumption, January-June 1941, was 5,205,260 bales; of which 4,418,439 bales (or 84.9 per cent) was consumed by southern mills; 621,810 (11.9 per cent) by New England mills; and the remaining 165,011 bales (3.2 per cent) by mills in the rest of the country.

In the consumption according to type of product manufactured, it will be noted that of the country's total consumption, there were 1,077,492 bales, or 20.7 per cent of the total, used in the manufacture of sale yarn. The predominance of this classification will no doubt be surprising to many interested readers. Narrow sheetings and allied fabrics accounted for the next largest group consumption, with 718,145 bales, or 13.8 per cent. The small amount of cotton consumed for duck, 299,230 bales, or only 5.7 per cent of the total, will surprise many people.

In view of the increase in cotton consumption during the past six months, we have compiled the following table showing the consumption by product classifications, in percentage, in the six-months period, July 1-December 31, 1940, and the six-months period, January 1-June 30, 1941. The total consumption in the last six months of 1940 was 4,207,457 bales; for the first six months of 1941, 5,205,260 bales—an increase of 997,803, or practically 1,000,000 bales. The following table shows the percentages of each consumption going into the several product classifications shown, for the two periods:

	July 1-Dec. 31 1940	Jan. 1-June 30 1941
Sales yarn	20.5%	20.7%
Duck	5.5	5.7
Tire fabrics and cords	7.4	7.9
Narrow sheetings and allied fabrics	13.5	13.8
Wide fabrics	8.4	8.1
Print cloth yarn fabrics	10.7	9.9
Fine goods	5.6	5.6
Napped fabrics	4.5	4.4
Colored yarn fabrics	7.0	6.9
Towels	2.2	2.2
Other woven fabrics and specialties	4.0	3.9
All other cotton products (not included above)	10.7	10.9
	100.0%	100.0%

From this table of comparisons it will be noted that in the face of an increase of practically a million bales in the total consumption, there was virtually no difference in the percentage utilized for each of the product groups, indicating there were no notable shifts from one product classification to another between the last six months of 1940 and the first half of 1941.

Looking at the percentage of consumption, of each class of product by districts, for the first half of 1941, we find that the mills in the southern states predominate in every classification but one. The South, according to these figures, produced 91.5 per cent of the sales yarn made in the country; 92.9 per cent of the duck; 93.9 per cent of the narrow sheetings; and so on through the list. New England led in fine goods production, with 65.7 per cent of the total; this classification accounting for 5.6 per cent of the total cotton consumption.

Consumption of Raw Cotton by Classes of Products Manufactured

Six Months Period, January 1 to June 30, 1941

Class of Production by Sections	Cotton Growing States Bales	%	New England States Bales	%	All Other States Bales	%	Total United States Bales	%
Sales yarn	986,335	91.5	70,177	6.5	20,980	2.0	1,077,492	20.7
Duck	277,922	92.9	8,261	2.8	13,047	4.3	299,230	5.7
Tire fabrics and cords	354,838	86.3	48,902	11.9	7,617	1.8	411,357	7.9
Narrow sheetings and allied fabrics	674,653	93.9	30,180	4.2	13,312	1.9	718,145	13.8
Wide fabrics	319,612	75.8	86,970	20.7	14,897	3.5	421,479	8.1
Print cloth yarn fabrics	504,844	98.1	7,320	1.4	2,702	0.5	514,866	9.9
Fine goods	100,668	34.3	192,741	65.7	-----	--	293,409	5.6
Napped fabrics	182,339	79.3	46,351	20.2	1,081	0.5	229,771	4.4
Colored yarn fabrics	331,540	92.5	24,996	7.0	1,959	0.5	358,495	6.9
Towels	107,949	95.0	3,456	3.0	2,241	2.0	113,646	2.2
Other woven fabrics and specialties	167,199	82.6	26,407	13.0	8,935	4.4	202,541	3.9
All other cotton products* (not included above)	410,540	72.7	76,049	13.5	78,240	13.8	564,829	10.9
TOTAL	4,418,439	84.9	621,810	11.9	165,011	3.2	5,205,260	100%

*Inclules 225,000 bales of cotton distributed by the Surplus Marketing Administration under various mattress projects.

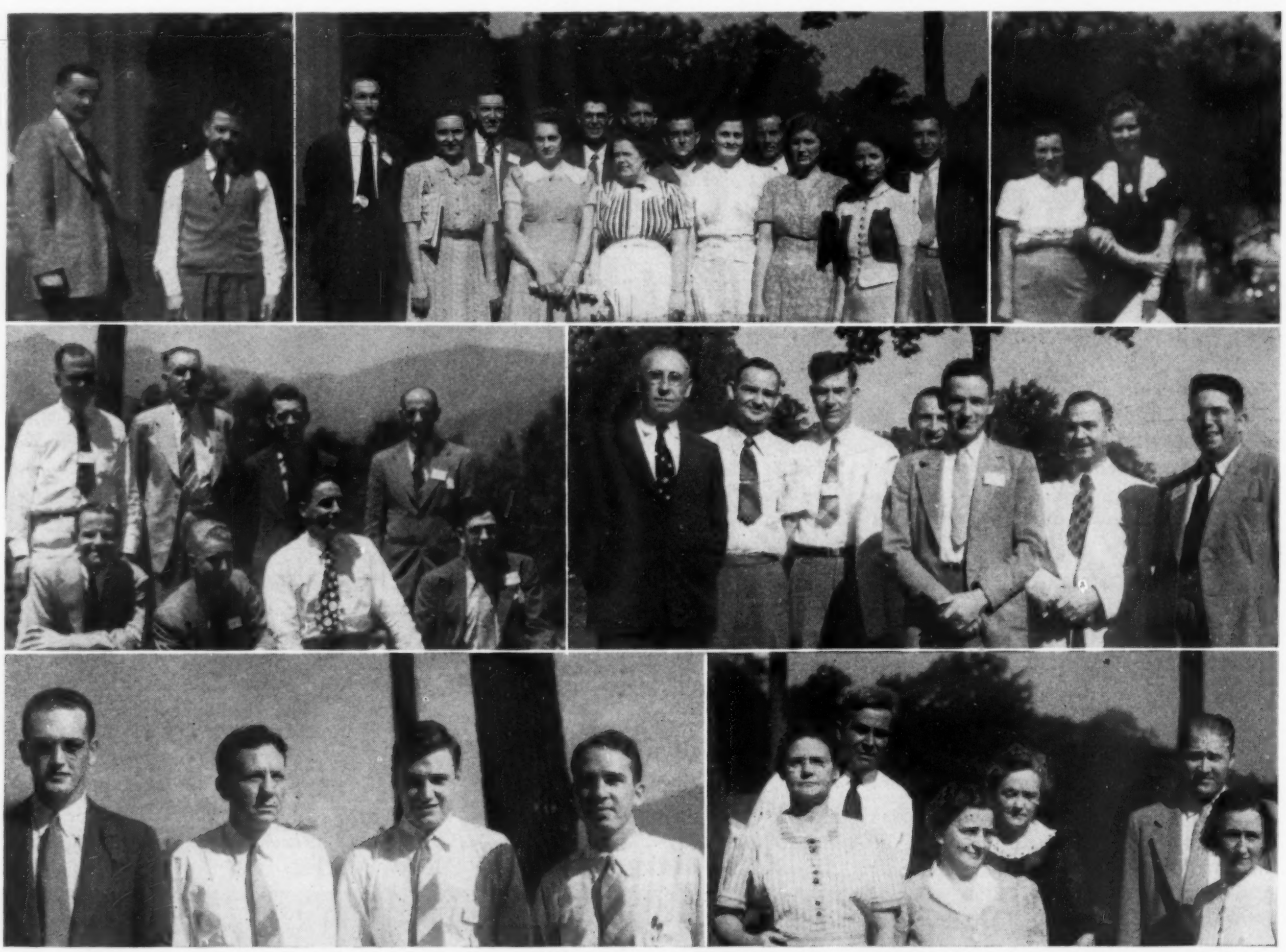
Textile Men Study Personnel Problems at Blue Ridge

REPRESENTATIVES of more than 50 southern textile plants attended the 3-day 22nd annual Southern Conference on Human Relations in Industry, held at Blue Ridge, N. C., July 17-19, exchanging ideas and opinions, and studying personnel problems with representatives of 130 industrial organizations from 16 states. The program of the conference consisted of addresses by experts on personnel relations, and of open forum meetings whereby questions could be asked on specific problems, the principles of industrial relations problems being much the same in any type of industry.

This conference has had its economic effect on the South. Men who have attended many of the conferences throughout its 22-year existence consider that it has had a definite bearing on improving industrial relations throughout the South, and that by bringing about improved programs of human relations in industry it has kept the industrial plants of the South operating on a more productive basis.

It is difficult for those who have never attended the conference to realize its value to both employer and employee. It is recognized by leaders in industry that a sound personnel relations program is of primary import to successful business operations, and that industry at large must become "human relations" conscious—a plant cannot derive *full* benefit from its own program, regardless of how sound, if other plants in the same district fail to have a sound program of their own. The value of industrial relations programs is cumulative as to time and pays dividends based on the soundness of the program and the amount of participation in such a program by other

Report and Photos by John C. Fonville of "Cotton".



• More than 50 textile plants in the South were represented at the Blue Ridge conference on human relations, and many companies brought several representatives, both operatives and key men. Some of those attending are shown in the above snapshots. Top row, left to right, **H. W. Crenshaw** of Stonecutter Mills, **J. L. Williams** of Burlington Mills. Last two pictures in top row are representatives from Avondale Mills of Alabama. See page 76 for list of textile mills represented.

Second row, the group from manufacturing division of Marshall Field & Company at Draper, Spray and Fieldale. They are **W. E. Boone, Howard Barton, W. W. Lambeth. H. E. Latham, R. J. Adkins, P. H. Burrus** and **F. T. Suttenfield.** The group at the right includes **P. O. Wilson, H. M. Jackson** and **B. R. Turnipseed** of Pacolet Mfg. Co., New Holland, Ga.; **H. L. Childers** and **M. J. Green** of Gainesville (Ga.) Cotton Mills; and **J. P. Guess** and **W. W. Rogers** of Abbeville (S. C.) Mills.

Bottom row, left to right, **John Wilkerson** of Cotton Mfgrs. Assn. of Georgia, **T. A. McNeill** of Monarch Mills, Lockhart, S. C., **C. B. Hayes, Jr.,** of Beaumont Mfg. Co., and **J. R. Fant, Jr.,** of Monarch. At right are representatives from Cowikee Mills, Eufaula, Ala., including **Miss Heddy Suggs, Mrs. Oma Alsobrook, D. G. Watson, Mrs. Frank Graddy,** and **Mr. and Mrs. Tyson Smith.**

industry in the community.

The conference opened Thursday evening, July 17, with an address by Harold F. North, industrial relations manager of Swift & Company, Chicago, who pointed out that though industry now faces the severest test in history, from the standpoint of human relations there is not much new under the sun, inasmuch as man has reacted to practically the same treatment and emotions since time immemorial and remains essentially the same in his basic psychology. He was emphatic that a definite company policy be established and that decisions be made without reservations because "decisions with reservations are not real decisions at all, but only postponements of issues that inevitably arise again and again with time wasting persistence. This is very likely to be the case with all decisions that are reached by compromises, for such decisions leave both parties unsatisfied. Almost always it saves time in the end to thrash a disagreement out to a conclusion no matter how serious the difficulties may be." The speaker admitted that often this process is too slow.

Mr. North maintained that the two primary objects of all industrial relations activities are to see that employees get a square deal; and to assist in the development of an effective working organization by promoting understanding, good will, and a spirit of willing co-operation among all who participate in any capacity in doing the world's work.

Touching on the subject of labor disputes, he brought out that within the field of industrial relations it is always easier to prevent difficulties than to try to settle them after they have arisen.

There is more pressure on labor at this time, Mr. North said, because of such unusual activities as selective service and the calling out of the National Guard, and he suggested that the employer reckon with these psychological effects on the employees and appreciate their position. He told of companies that seem to abandon their industrial relations program during times of depression and in times of expansion, and advised that industry not sacrifice the principles of the game for any reason and that industry not neglect the primary interest of human and industrial relations in order to "get goods out". On this point Mr. North mentioned those that could not attend the conference on account of "pressing business", or those that came only for the earlier sessions.

He called for early settlement of grievances and short term problems, because, as the speaker put it, "short term problems have a way of becoming long term problems".

One of the most interesting and instructive sessions of the conference was the dramatic play typifying a day in the office of a southern employee relations manager. This photo shows the group from the tire cord mills of the U. S. Rubber Company, Hogansville, Ga., who put on the playlet.

◆ ◆

Alvin E. Dodd, president of the American Management Association of New York City delivered the principal address at the Friday morning session. Mr. Dodd reviewed the current labor situation and outlook and injected a spirit of optimism in the group by saying that industry should not take too pessimistic an attitude toward the disturbances of recent months because from his knowledge these are the exception rather than the rule, even though they are played up in the headlines—he felt that the whole field of industrial relations should not be condemned because of scattered reports of conflict. He humorously suggested that formerly all blame for disturbances was placed on communism, but that since the recent turn of events this had gone out of date.

Mr. Dodd said that because of government support, organization and the premium on manpower, labor is in a strong bargaining position, but cautioned that labor stands to lose much if it does not exercise discretion.

Essentials of Sound Program

From the standpoint of management, he pointed out that the employer does not believe good labor relations can be won with bayonets, duplicity and benevolences, but only by the sober truth being known and by sound thinking and sound principles of industrial relations, and in this line he gave what he considered to be a sound program, listed in brief these are:

(1) Heads of departments to be responsible for their respective organizations in industrial relations, but that (2) no question or responsibility is too small that it cannot be brought to executive attention. (3) Hiring—preference should be given to former employees with good records (4) There should be no discrimination between race, creed, political opinion or membership in any organization (5) Promotions—to be governed by ability, skill, efficiency, seniority, family status, place of residence (6) Layoffs—give advance notice with reasons (7) Keep adequate personnel records as to performance, health, etc. (8) Wage scale to be at prevailing community rate.

(9) Hours—one day's rest in seven (10) Pay for overtime (11) Vacations (12) Job training to be done by department heads or men under them. The ability to instruct is the essence of ability to manage (13) Training program for promotions (14) Training of supervisors so that they will be informed on and can explain to employees the company's policy (15) Facts to be made known about the company on its policy, operating problems, financial status (16) Safety—train in safety methods and educate on occupational disease, and have program to care for employees when hurt or sick (17) Regular physical examinations (18) Security—be able to give regular employment and to stabilize business operations (19) Insurance—co-operation in getting death, sickness, accident, etc., insurance (20) Employees shall have freedom of contact and freedom of expression — employees should feel free to ask what company is doing and are encouraged to make suggestions (21) Grievances—employees may appeal to highest authorities whenever need arises (22) Collective bargaining.

Mr. Dodd then told of some of the problems and their solutions that are being made by industry in the present expanded operations. One company has lost a number of skilled operatives, and in order to train additional men, paid skilled die-setters a weekly bonus for the training of apprentices. Another company needed highly trained labor to lay out work on sheets of metal and to fabricate it. The solution to this was co-operation between workers and engineering department to make detailed working plans, showing seams, etc., and the result was that unskilled men were able to do more of the work and thereby increase production. Still another company had trou-

Key men from the tire cord mills of U. S. Rubber Company attend the Blue Ridge conference each year. The group above are from the company's plant at Hogansville, Ga., Shelbyville, Tenn., and Winnsboro, S. C.

ble getting co-ordination between the men in the various departments, and this was put directly up to the union representatives, who themselves suggested yellow lost-time slips indicating the cause of trouble.

Preventing and Handling Grievances

In the open forum discussion on the preventing and handling of grievances, the following points were brought out: (1) The company must have a personnel policy that is clearly stated, and that must not be written in vague terms. A policy that cannot be expressed publicly to those it will affect is not sound. (2) Management must live up to its stated policy in actual practice, and must have no "window dressing" policy just to attract favorable attention. Do not have one policy for public consumption and another for operation within the plant. (3) In a sound program the policy should be carried out by the supervisors, and under the system the employees must get a square deal. (4) Harold F. North, "Tell me to whom your employees go with their grievances and I'll tell you the kind of personnel program the company has."

The following factors necessary for the supervisor to handle the program of personnel relations within his own department were given: (1) He must be sincere with both employees and company; (2) He must have the ability to diagnose problems and come to a just decision; (3) He must be able to change when the facts change, and not be stubborn; (4) He should not be a back-slapper; (5) It is his duty to prevent grievances rather than settle them; (6) He must base his decisions on understanding instead of a set of rules; (7) He must harbor no favor or prejudice; (8) He should allow room for honest mistakes; and (9) He should recognize that employees have their own ideas.

The principle of proper training was brought home strongly in an example given of hiring an office boy. The youth was put on the job without any instruction, and within a short time he had the reputation of being a "sorry" employee. When the personnel department had its attention brought to the case, it was found that no one had given instruction to the boy and consequently he had no opportunity to learn; this had brought about an unfair condition both to the boy and to the other office employees, but as soon as the cause for the trouble was discovered, someone was appointed to train the new office boy, who in a very short time became the "best office boy we ever had" and received an increase in salary.

It was further brought out that the position of the personnel office is not to interfere with departmental supervision, but that it is its job to cause the employees to have a healthy respect for the foremen of the various departments. The foreman should not be "undercut" unless he takes the wrong attitude.

Supervisor Considers Self "Expert"

One man said that at his company the personnel department is not in good favor because every supervisor considers himself to be an expert in the handling of industrial relations problems, and he was told that this is quite common; in such cases the supervisors should be sold on the idea that it is just as logical to take their personnel problems to the personnel manager, who is an expert in his field, as it is for the supervisor to call on the engineer, who is also an expert in his field.

One of the most interesting features of the conference was the dramatic presentation of "A Day in the Employee Relations Office of a Southern Industrial Plant", put on by a group of employees of the tire cord mills of the U. S. Rubber Company, Hogansville, Ga. This showed the multitude of different types of problems that come to the personnel manager, and how his work not only promotes better industrial relations, but relieves the supervisor of many details so that he can spend more time on his production job. In this presentation it was shown that the personnel manager and the supervisor work hand-in-hand to achieve good personnel relations.

Charles R. Hook, president of American Rolling Mill Company, Middletown, Ohio, spoke on building confidence in the plant and in the town. It was his opinion that nothing takes the place of personal contact with the employees. When a man applies for a job the very first interview is important, and it is essential that he be given a good impression. New men are told the many necessary things about the job, the company, etc., and he is given a booklet entitled "Information for New Employees", which introduces the new employee to the various departments within the organization, tells him about working hours, rules governing plant conduct, insurance, etc. He is also given another booklet outlining the company's policies. Also, the employee is told the "why" of things that affect him and his service with the company.

Mr. Hook explained that his company endeavors to make effective use of employee papers and house organs, and besides the printed policy and information for new employees, at intervals the company publishes a report for employees entitled "How's Business", which gives the business outlook, tells of some of the work that the company is doing, explains about the taxes being paid, explains where revenue comes from and where it goes, and keeps the employee posted on various things that he is interested in. In other words, the employee is considered part of the business and he is told what is going on, and the employees appreciate being told.

Mr. Hook said that a man's attitude on the job is influenced by his environment on the outside, and if the outside conditions are favorable, such as having churches to attend, scouting work, decent homes, etc., the employee comes to the job not to *labor* but to *work*—and there's a difference. This company has no union in the plant but does have representatives from each department to represent the employees on the approach to wages and working conditions, and the attitude is taken that what is best for the employee is best for the company, and what is best for the company is best for the employee.

As regards public relations, the people in the community know what is going on through editorials, reprints of editorials from the house organ, etc.

The Blue Ridge conference has contributed toward better industrial and

(*Continued on page* 76)

CURRENT TEXTILE TOPICS

New muddling by new deal

JULY CAME IN with cotton-textile production reported running at an annual rate above 11,000,000,000 yards of cloth. The heaviest previous production was 9,593,557,000 yards last year and before that 9,445,914,000 in 1937. Thus the cotton-textile industry was working to promote the nation's defense program. But not without unnecessary difficulty.

It was between the millstones of a confused political-economic situation in Washington. On the one hand was an Administration fostering a strong market for raw cotton and on the other a government agency seeking to lower prices for cotton goods. The result was a stoppage of trading in cotton goods. The first week of July was declared the quietest ever known in Worth Street.

While prime considerations of production for defense and measures for paying the astronomical costs of the program were sidetracked for new economics, goods manufacturers had to divert their attention from important market matters. They were forced to concentrate on efforts to bring about change in rulings that threw the market out of balance.

All this took many days, as there was no common attitude on what action was desirable for the industry to take. Some were minded to challenge the legality of the price-fixing order. Fortunately the mills were in position to accept complacently the temporary suspension of market activity, being sold so far ahead.

Whither sails ship of state

Raw cotton was boosted under government stimulus to a peak for 11 years at the same time that the OPACS was establishing its arbitrary price ceilings on goods, following similar action on combed yarns. The goods move was about simultaneous also with the imposition of the new wage minimum for the textile manufacturing industry.

Cotton goods manufacturers, indeed all producers, obviously are obliged to adjust their prices to rising costs. Ceiling prices of arbitrary nature invite manipulation and threaten mill disorder. As we cited in the June issue, a rigid plan of control in prices is shown by experience to put a premium on cheapness against quality.

Ever since the war started in Europe, officials in Washington have dangled before the public eye a bogey of inflation. Now the Administration is tackling that bogey as a reality, notwithstanding the Unlimited National Emergency which makes a task itself so vast as to demand concentration of all our national effort. All "all-out" effort is demanded of the individual when the government speaks. Yet the Ship of State sails into unknown economic waters and hinders the very co-operation that it seeks.

Private business abjures inflation

From the beginning of the European war, the leaders of business were prompt to recall the disastrous experience under inflation from the first World War and since they have worked to avoid it. Strangely enough the Administration has planted the seeds of the very inflation that it would avoid, in its wage and AAA program. Do the officials figure that thereby the government can carry the vast tax load, regardless of stifled profits for industry and investor, normally large sources of revenue?

Speaking on control of prices, the president of the Association of Cotton-Textile Merchants of New York, W. Ray Bell asserted that the cotton-textile industry was entirely willing to cooperate with the OPACS in any equitable method of controlling prices. He argued that "an equitable price ceiling for cotton textiles must provide for fluctuations in the two major elements of the cost of producing cotton goods—raw materials and labor."

Something which the Administration well might ponder was his further comment that "the first consideration of the cotton textile industry is to do all within its power to expedite the National Defense Program. The industry's tremendous increase of production is striking evidence of this." And he also said: "We don't want inflation and don't want to have our industry contribute to the causes of inflation in any way."

Pending clarification of the situation created by the imposition of price ceilings, prices on the goods affected were withdrawn. Before progress toward clarification had really begun, moreover, new conditions had arisen to accentuate the confused market position.

Trading, obliterated by a distorted relationship between costs and the ceiling prices, was not quickened by news of the smallest cotton acreage since 1895 and consequent further advance in prices of the raw material. Here was an element usually calculated to promote activity in cotton goods, but its influence was nullified by the abnormal conditions.

Concurrently the occupation of Iceland was a step further in the defense which implied a more definite war economy. Another normal force for increased trading was the announced plan of the government to open bids on more than 25,000,000 yards of twills and drills. Some goods wanted by the Army were not subject to ceilings, but on others the outlook was confused.

Trade sentiment was generally favorable to the government idea of forestalling an unhealthy spurt in prices, but opposed to the method adopted toward that end. It was felt that modifications would follow the unfortunate action and that reasonable rates ultimately could be established. The summer market, meantime, was seriously disrupted by the government agency's move.

Indeed for the time being a fundamental change in practice resulted. As stated by Mr. Bell, trading which had always been on contracts for future delivery suddenly became a spot market. And even spot business was negligible, since the mills were largely sold ahead for some months.

• *More than 525 firms, varying from the nation's largest cotton manufacturers to small community banks, have signed agreements to use this emblem as part of the campaign to increase consumption of cotton products. The National Cotton Council is offering electrotypes of the emblem, in a variety of sizes for use on stationary, labels, tags, cartons and in advertising.*

New England Mill Situation

TRADING IN cotton goods among New England mills bogged down with the general market, as sellers were uncertain of the effect of ceiling price

imposition. Some sections of the market for fancy combed goods and colored-yarn cloths held the view that their products would be influenced, regardless of whether they were directly under the ceiling regulations.

Large commitments had been made by some manufacturers at the top of the price movement under free trading. This business was cause for worry on the announcement of ceilings, although price advances around 30 per cent since early in the year were not so large as in many other classes of goods. Converters of fancy goods have in the past had sad experience from unforeseen adjustments downward in prices.

Business in spot cotton, incidentally, was practically paralyzed right after the government price action. Few mill buyers in this district were inclined to operate in the rising cotton market under the circumstances. It was feared that possible shifts in mill operations might necessitate changes in the buying of cotton, for one thing.

Fisher registers mill opposition

Opposition sentiment among mill men to the government program, together with the reasons therefor, was registered by Russell T. Fisher, president of the National Association of Cotton Manufacturers. The order establishing ceiling prices, "seems to put a premium on inferior goods to the detriment of quality," said Mr. Fisher, and "if this principle is not modified there will be very serious consequences for both the mills and the consuming pubic."

As an example of the ineptitude of the action by the OPACS, which was the chief cause of general resentment among the nation's mill men, Mr. Fisher cited that it was "a distinct reversal of what the trade had been led to expect. At the consumer conference held under the auspices of the Secretary of Commerce early in May, Miss Elliott of the Price Administrative Office had considerable to say about the maintenance of quality."

Going on as to the effect in this district, Mr. Fisher said that "a great many mills in this area have only been able to continue as producers because there are a sufficient number of discriminating buyers willing to pay the additional cost for quality goods. If proper allowances for quality are not made, the consequences in the long run will be most serious."

Active progress in manufacturing

Skilled labor needed for defense purposes has continued to affect mills of New England and they have lagged somewhat in the latest rise of the national cotton industry to the highest level on record. Yet during the first half of the year the northern mills did progress steadily upward and New England production reached the highest level since 1933. Despite the stifled trading of July, they had good backlogs into the later months of the year.

Consumption of raw cotton in this district for the first five months of this year amounted to 519,083 bales. This was larger by 35.6 per cent than the total of 382,855 bales for the like period of last year. The dominant position of Massachusetts appears not only in a total consumption for the five months of 274,570 bales, but a gain relative to 1940 of 40.7 per cent or well above the average and the largest among the individual States in the section.

Favorable market conditions and reasonable prospects for a long activity in the mills have for some time been instigating plans among manufacturers for improvement of their plants. A number of large concerns are in the midst of modernizing and some expansion activities.

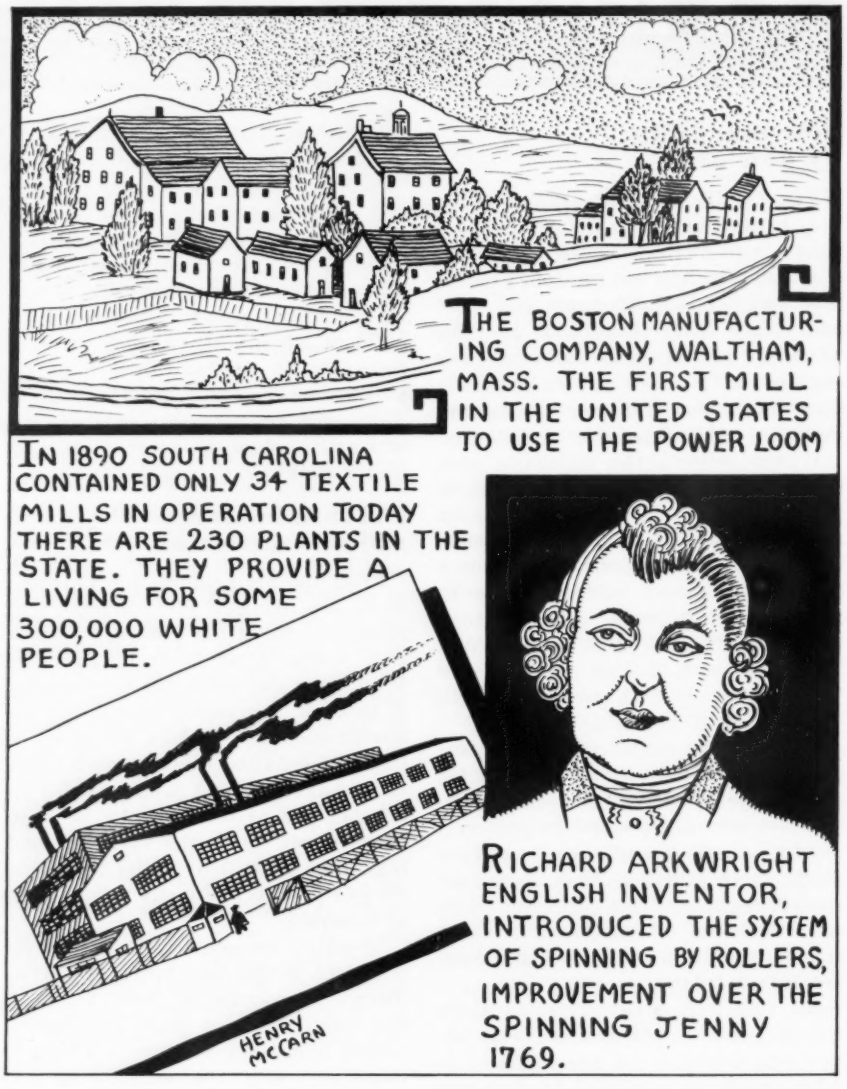
Mill owners modernizing

Among them the Gosnold Mills of New Bedford, Mass., have been revamping the weave room, the change involving 508 new automatic looms and an expenditure of $500,000. The Kilburn Mill has installed 1,000 spindles and more are on the way. The Wamsutta Mills recently have made changes including a new spooler and warper.

One plant idle for 10 years, the Alice Mill of Woonsocket, R. I., has been opened by the United States Rubber Company for the manufacture of barrage balloons.

Danielson Manufacturing Company, of Danielson, Conn., textile loom products, has acquired the Old Peep Toad mill for expansion of its facilities.

TEXTILE HIGHLIGHTS, by Henry McCarn


THE BOSTON MANUFACTURING COMPANY, WALTHAM, MASS. THE FIRST MILL IN THE UNITED STATES TO USE THE POWER LOOM
IN 1890 SOUTH CAROLINA CONTAINED ONLY 34 TEXTILE MILLS IN OPERATION TODAY THERE ARE 230 PLANTS IN THE STATE. THEY PROVIDE A LIVING FOR SOME 300,000 WHITE PEOPLE.
RICHARD ARKWRIGHT ENGLISH INVENTOR, INTRODUCED THE SYSTEM OF SPINNING BY ROLLERS, IMPROVEMENT OVER THE SPINNING JENNY 1769.
HENRY McCARN

"THE SITUATION" as Seen Across an Executive's Desk

A review, to date, of "price-ceiling" developments and effects in the markets for textile products

July 24, 1941

NEVER before has the situation in the textile business seemed so muddled or any attempt at reviewing it so inadequate. The primary reason, of course, is the action of the Office of Price and Civilian Supply, in Washington, in establishing "ceiling" prices on six major lines of cotton-textiles. This action came on June 28, and the "ceiling" prices authorized, on the fabrics shown, were:

	Cents per Pound
Standard print cloth (40-inch and narrower)	39
Carded broadcloth (40-inch and narrower, 100 sley and below)	39
Combed broadcloth (40-inch and narrower, 136 sley and below)	54
Sheetings (40-inch and narrower)	30
Part waste osnaburgs (40-inch and narrower)	25
Tobacco cloth (40-inch and narrower)	39

These prices were approximately 15 per cent below the prevailing market on these fabrics. They were applied just four weeks after the original ceilings on combed yarns were ordered, and while the chaos from that order still prevailed.

The immediate reaction to the ceiling prices was one of complete indignation on the part of textile manufacturers as a whole, including but not restricted to those making the fabrics involved. The first major result was an unprecedented situation in Worth Street, as immediately all quotations on the fabrics involved were withdrawn.

Indignation in the industry rose highest because of the retroactive feature of the price order, making the ceilings applicable to contracts already in hand. It was pointed out the price schedule

(1) failed to relate the price of goods to the constantly changing price of cotton (raw cotton prices at the time indulging in sharp and unexpected increases;

(2) failed to relate the price of goods to the cost of manufacture, which was steadily going up due to increases in wages, supplies and other operating expenses (the wage order previously announced increased the minimum wage in the textile industry 15 per cent effective June 30);

(3) failed to provide either reasonable or adequate return to manufacturers based upon the current price of cotton and cost of manufacture; and

(4) failed to protect existing mill contracts for the delivery of goods based upon higher prices which the purchaser had agreed to pay.

There were other reactions, including the feeling that the establishment of price ceilings was unconstitutional and undemocratic, but that position was hardly tenable under the circumstances. Another view, soundly expressed by the president of The Cotton-Textile Institute, was that such an arbitrary procedure of price determination ignores certain fundamental principles of economics. He pointed out that (a) the prices of finished goods must necessarily be geared to raw material and labor costs; (b) in a time of "unlimited emergency" when maximum production is the thing most essential to the country's defense, prices should be fixed as to permit and encourage the utmost in productive effort; (c) if the price of a particular commodity is to be fixed by government decree its relationship to the prices of other commodities which are competitive or complimentary must be considered; (d) a price control system designed to prevent inflation cannot achieve that object merely by beating down prices of the primary manufacturers; and (e) the retroactive application of a fixed price cannot be made equitably when there are involved a number of corollary contracts and risks.

It was felt that the OPACS office had established the ceilings without due consideration of their effects; that its action had been taken unfairly since it had not consulted with recognized agencies of the industry, and with few of its individual members. (Spokesmen for the administration had made it plain that participation by trade associations would risk prosecution for violation of the anti-trust laws; the OPACS office encouraged individual mill executives to confer with them, but some of those who tried reported difficulty in securing an audience).

As stated, stagnation prevailed in the market; in fact, there was no market, for the first time in 25 years. Mills withdrew all quotations on grey goods; just as since May 26 there had been no combed yarn goods. Shipments were offered by some rugged individualists at before ceiling prices; these offers brought a prompt knuckle-whacking from OPACS, which cautioned such sellers to keep within the ceiling level. Regardless, grey goods manufacturers continued to do business on contracts in hand. OPACS had expressed the hope that fabrics not included in the ceiling order would seek a nominal and comparative level, but that didn't happen.

Newspapers throughout the South and the farm West bitterly denounced OPACS, pointing out that the consumers of cotton goods are the farmers; that ceilings on grey goods automatically placed a ceiling on farm products. The president of the Cotton Textile Merchants Association of New York, a former member of OPM, pointed out that the industry wished to co-operate in defense and that these price-fixing efforts of OPACS made defense efforts in the textile industry ineffectual since marginal production on defense materials would have to be withdrawn if forced to operate at a loss.

After more than two weeks of chaos, criticism and confusion, Leon Henderson appointed an advisory panel, on grey goods prices, consisting of:

Robert Amory, Nashua, N. H.; Howard Baetjer, Baltimore, Md.; C. T. Broughton, New Bedford, Mass.; Donald Comer, Sylacauga, Ala.; Charles A. Cannon, Kannapolis, N. C.; George S. Harris, Danville, Va.; K. P. Lewis, Durham, N. C.; Harry Oppenheimer, New York City; Scott Russell, Macon, Ga.; J. E. Sirrine, Greenville, S. C.; N. L. Smith, New Brunswick, N. J.; Earle R. Stall, Greenville, S. C.; Robert T. Stevens, New York City; Charles A. Sweet, New York City; and W. J. Vereen, Moultrie, Ga.

This committee, a truly representative group of the textile industry, went to Washington on July 15, for what, trade reports said, Administrator Leon Henderson of OPACS expected to be a brief conference. They stayed through July 16, then through the 17th—when rumor indicated a willingness by Mr. Henderson to raise the print cloth ceiling to 41 cents, with the panel holding out for 44. Finally, on Saturday, July 19, a new schedule of ceilings, revised upward, with print cloth at 43 cents was announced. The new schedule then announced was:

	Cents per Pound
Standard print cloth, (40-inch and narrower)	43
Carded broadcloth (40-inch and narrower, 100 sley and below)	43
Combed broadcloth (40-inch and narrower, 136 sley and below)	61
Sheetings (40 inch and narrower):	
Yarn numbers up to 15s, inclusive	35.5
Yarn numbers 16s to 21s, inclusive	36.5
Yarn numbers above 21s	38
Part-waste osnaburgs (40-inch and narrower):	
Yarn numbers up to 9s, inclusive	29
Yarn numbers above 9s	32
Tobacco cloth (40-inch and narrower)	46

In addition to the increased ceilings, authority was granted to charge a premium of 1 cent per pound over the ceilings on goods made with feeler motions; and for fabrics of shade cloth quality a further premium (in addition to the feeler motion premium) was allowed.

At the same time, combed yarn ceilings were revised, basis of 3 cents per

pound up on 30s singles and 1 cent a pound up on 30s/2 and 120s/2. This was considerably less than the revision asked for by the combed yarn people, and much below cost on extra fine numbers, it was claimed.

Generally, the revised ceilings and premiums allowed by OPACS on the six woven classifications, followed the efforts of the advisory panel, were met with enthusiasm by Worth Street, and, after a three-week deadlock, business was resumed. Disappointment was expressed that OPACS refused to relent on its stand that these ceilings must apply retroactively to existing contracts; but the higher ceilings removed a large volume of goods under contract from the operation of the retroactive provisions. "Nevertheless", said W. Ray Bell, of the cotton textile merchants' association, "there remains a considerable volume of goods contracted for at prices above the new ceilings. While the policy of all mills has not yet been determined, indications are that all current deliveries will now be made on such contracts at the new ceiling prices."

Mr. Bell declared that the action of OPACS, in revising the price ceilings, had broken the log jam on selling and delivery of cotton grey goods, and expressed commendation of the action of Mr. Henderson "in supplying what is hoped to be a permanent basis for cooperation between OPACS and the cotton-textile industry."

Mr. Bell said yesterday (July 23), "I believe that the new ceilings are regarded as a workable adjustment by the industry generally. They are, I suppose, in part a recognition of increased cotton prices and wages since publication of the original order; cotton rose about a cent a pound between June 27 and July 19, and minimum wage rates increased 15 per cent on June 30. Cotton has gone up another cent since Friday, when the new ceilings were decided upon, and continuation of this trend will, of course, altar the situation contemplated by OPACS in making the present arrangements. The publicly announced policy of OPACS would seem to give reasonable assurance that action would be taken to revise ceilings further in the event of material alteration in basic elements of cost."

Mr. Bell also said that much of the difficulty as to the retroactive feature of the price orders, "will be removed by the assurance, which I understand OPACS has given, that contracts made under present ceilings will not be subject to the operation of retroactive provisions in the event of further ceiling revisions. Such a policy will go a long way towards restoring normal operations in the industry, as any threat to the validity of contracts tends to disrupt the normal functioning of the cloth markets."

That's the story of price ceilings up to this writing. There are definite indications that shortly, ceilings on other cotton-textile fabrics, not yet affected, will be announced, and that also there will be ceilings announced on rayon fabrics.

The Raw Cotton Situation

The raw cotton situation is meriting attention, since the first crop report estimates the smallest acreage sown to cotton since 1909: 23,519,000 acres. They say that if normal abandonment occurs only 23,000,000 acres, or the smallest acreage since 1925, will be harvested, and that the crop will undoubtedly be a small one. The heaviest boll weevil infestation in many years is showing up, and it may be that this crop may fall below total demands since domestic consumption is averaging 10,000,000 bales for this year. Under the lease-lend bill, exports of 25,000 bales a month are going to Great Britain, but this amount is being drawn from the government-held stocks.

During the last week in June, the cotton market hit an 11-year high when May touched 15.11 cents on the New York Exchange, and has climbed steadily every since. Not since Hoover's efforts to peg the price has cotton reached its present point.

Power Restrictions Removed 'til Sept. 1

On July 23, it was announced that, effective that date, all restrictions on the industrial use of power in Georgia and other southern states were suspended at least until September 1, 1941. The removal of the restrictions was made possible by continued rains in certain sections of the Southwest resulting in a substantial increase in the quantity of power available from "river-flow" plants. As yet the rains have brought relatively little increase in the water reserves on the major hydro-electric storage lakes, but gradual improvement there is hoped for.

Despite the removal of restrictions, industrial customers of the power companies affected are urged to continue to transfer as much of their load as possible to the period between 11:00 P. M. and 7:00 A. M., to continue the program of distributing the load throughout the entire 24-hour period.

● *Southern headquarters for Calco Chemical Division, American Cyanamid Company, and the American Cyanamid & Chemical Corp. have been moved to a new, air-conditioned building, especially designed for the needs of these organizations. The address is 3333 Wilkinson Boulevard, Charlotte, N. C.*

The new structure houses the offices, laboratories and warehouses of the two organizations. Exterior view of the building and a view of one of the laboratories, are shown above. The building provides 8,600 square feet of space; air-conditioning in the laboratory system is separate from that of the office, preventing circulation of laboratory odors to other parts of the building.

The laboratories are illuminated by daylight fluorescent lighting.

J. E. Moore is southern sales manager of Calco, and Hugh Puckett is southern sales manager of Cyanamid.

TIMELY NEWS ITEMS with a TEXTILE SLANT

Terrell Machine Company, Charlotte, N. C., has announced effective August 1, the appointment of James F. Notman as direct factory salesman for the New England territory. He will handle the Terrell line of bobbin cleaning and handling equip-

Mr. Notman

ment and also Denman fabric loom parts for which the Terrell company has the exclusive sales agency. Mr. Notman was graduated from the M. I. T. in 1935 and until joining the Terrell organization traveled in New England as sales engineer for B. F. Sturtevant Company.

At the same time E. W. S. Jasper, Inc., Terrell sales agency for Pennsylvania and New Jersey, will add New York State to its territory.

James A. Trail has joined the Hyatt Bearings Division of General Motors Sales Corporation, having formerly been associate professor in mechanical engineering at the A. & M. College of Texas. He will make his headquarters in Dallas, Tex., covering the southwest territory. A. J. Swiller, who formerly handled this territory for Hyatt, now works out of the western division headquarters in Chicago.

William A. Stutts, assistant account executive with J. M. Mathes, Inc., has joined American Viscose Corporation as an assistant to John A. Spooner, advertising manager. Lester Loh, Jr., succeeds Mr. Stutts.

Lustra-Tred is the name of a new line of washable spun rayon scatter rugs made of American Viscose Corporation's Crown-Tested rayon. The rugs were introduced at the July floor cover shows and were made by Robert Cleeland's Sons, Inc., Philadelphia.

S. Blickman, Inc., Weehawken, N. J., has appointed Slaughter Machine Company, Charlotte, N. C., as representatives for the sale of Blickman stainless steel textile dyeing equipment in the states of Virginia, North Carolina, South Carolina, Tennessee, Georgia and Alabama.

W. W. Nelson, for the past four years service engineer for The Foxboro Company, Foxboro, Mass., has been transferred to the New England sales force. Elmer E. Forslind, who has been in various branches of public utility engineering, has joined the company and is attached to the New England office at Foxboro. Paul T. Graff has joined the company as sales engineer and will make his headquarters at the company's main office.

F. V. MacArthur, after nearly 50 years of service, has resigned as secretary and assistant treasurer of Link-Belt Co., Chicago, Ill., and is retiring from business. Harry E. Kellogg, treasurer and assistant secretary, has been elected secretary, thus becoming secretary and treasurer.

Warner Chemical Company and its associates—California Chemical Company, The Magnesol Company and the Monarch Chemical Company—have established southern headquarters in Greenville, S. C., 804-5 Woodside Building. Preston F. Tinsley, Jr., is in charge of the office and covers North Carolina and Tennessee; H. Roper Davis has headquarters in this office, covering Georgia and Alabama. Miss Margaret Stroud, formerly associated with

Mr. Tinsley

Mr. Davis

the Textile Warehouse Company, Greenville, is office manager.

Warner Chemical Company is one of the country's largest producers of chlorine and caustic soda, sodium phosphates, and other chemicals used in the textile industry. Its associated companies produce magnesium oxides, Magnesite for patching linings of open hearth steel furnaces and manufacturing refractory brick, Magnesol, a powder used on dry cleaning plant filters for removing impurities from dry cleaning solvents, baking powder, and other products.

Hercules Powder Co. has purchased the synthetic resin business of John D. Lewis, Inc., Providence, R. I. Hercules acquired the land, buildings, equipment and processes of the Lewis synthetic resin plant at Mansfield, Mass., and the entire plant at Brunswick, Ga. Hercules will continue to manufacture such Lewis products as ester gum, maleic-modified ester gums, phenolic-modified ester gums and various phenolic and alkyd resins. John D. Lewis, Inc., will continue in the production of textile and heavy chemicals at Mansfield, Mass. Lewis company's sales and manufacturing facilities will be joined with the synthetics department of Hercules, which has been producing synthetic resins since 1936 under the direction of W. M. Billing.

Borne Scrymser Company is constructing a new two-story brick and steel office building as an addition to the Elizabeth, N. J., plant. Upon completion of the new unit, the executive, clerical and sales departments of the company will be moved there from the present location in New York City.

Aberfoyle Mfg. Company, Philadelphia, Pa., has been appointed sales representative for the Heinemann Company, Chicago, raw silk dealers and producers of thrown silk and combination yarns for hosiery, knitting and weaving trades.

Gaston County Dyeing Machine Co., Stanley, N. C., report recent installations of their stainless steel beam and package dyeing machines in the following plants: Stead & Miller, Concord, N. C.; Florence Mills, Forest City, N. C.; Proximity Mfg. Co., Greensboro, N. C.; Riverside & Dan River Cotton Mills, Danville, Va.; and Pepperell Mfg. Co., Lindale, Ga. These include extracting and drying equipment. Installations of the company's package dyeing machines, stainless steel, with extracting and drying equipment have been made at Elm City plant of Callaway Mills, LaGrange, Ga.; January & Wood Co., Maysville, Ky.; Schlake Dye Works, Chicago, Ill.; and National Tinsel Mfg. Co., Manitowoc, Wis.

R. D. Hughes, of R. D. Hughes Sales Co., Dallas, Texas, has been appointed agent in the Texas territory to handle Boyce Weavers knotters for Mill Devices Company, and Carter ring travelers for Carter Traveler Company, according to announcement by E. Haines Gregg, secretary of A. B. Carter, Inc., Gastonia, N. C.

Seydel-Woolley Increases Plant

Seydel-Woolley & Company, 748 Rice St., N. W., Atlanta Ga., have started a two-story addition to their plant for additional manufacturing, storage of raw materials and finished products, and to house a modern pilot plant. A second-story addition to the present one-story portion of the plant will house an up-to-date research and control laboratory, together with conditioning room and office space for the chemical staff, which is headed by Dr. Paul Vasser Seydel, who recently returned from studying in Zurich, Switzerland, after a leave of absence of two years.

New Textile Publications

The Bristol Co., Waterbury, Conn., Mill Supply Division. Catalog 846a on complete line of socket screws, including set screws, cap screws, several types of wrenches and stripper bolts—with multiple spline or hex socket.

Bulletin 731 describing steel belt lacing for joining or repairing machine and conveyor belts.

Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. "How to Select Small Electric Motors", a work sheet showing the proper selection of ⅛ to ¾ hp. motors for light industrial work. Descriptive data 33-216 on oil circuit breakers for indoor service.

Carlyle Johnson Machine Co., Manchester, Conn. Literature on Maxitorq floating plate multiple disc clutch, series 2, single and double types of clutches.

Committee for Constitutional Government, Inc., 205 E. 42nd St., New York City. "America's Future", a 32-page booklet on the right to work and how to implement it. Profusely illustrated with mob-strike victims. Price 10 cents.

Hough Shade Corporation, Janesville, Wis. New bulletin illustrating various designs for all types of industrial sash, including skylights and monitors. Test show that 30 per cent to 40 per cent more light and air can be admitted while reducing heat and glare.

Brown Instrument Company, Philadelphia, Pa. Bulletin No. 89-14 on "Brown Control Accessories for Pneumatic Controllers". Also, Bulletin No. 29-33 on the "Brown Desuperheater Control System".

Hygrade Sylvania Corporation, Ipswich, Mass. Profusely illustrated publication showing various types of fluorescent lamps and their applications.

Cochrane Corporation, Philadelphia, Pa. "Feed Water Chemistry", a booklet giving fundamental reactions involved in water softening.

New Departure, Bristol, Conn. 15th edition of handbook listing principal types and sizes of forged steel ballbearings. Has finger index for quick reference.

General Electric Company, Nela Park, Cleveland, Ohio. 28-page booklet, profusely illustrated, showing examples of fluorescent lighting installations.

National Safety Council, Inc., 20 N. Wacker Drive, Chicago, Ill. "1940 Accident Rates in the Textile Industry".

U. S. Department of Commerce, Washington, D. C. Information bulletin No. 2 on "How Inventors Can Aid National Defense".

◆

AATCC Tests for Water Resistance

The committee on water resistance of fabrics of the American Association of Textile Chemists and Colorists, with Dr. Harold W. Stiegler of the American Cyanamid Company as chairman, has recently drawn up tentative procedures for 1.—Hydrostatic Pressure Test, 2.—Spray Test and 3.—Immersion Test. These three tests, which have been adopted as tentative by the AATCC, are the outcome of considerable investigation and actual use.

The tremendous increase in the commercial importance of water-repellent fabrics has indicated the need for simple, reliable methods for evaluating their water resisting properties. Such fabrics possess three distinct properties which, therefore, require three separate tests for their evaluation. The proper use of the tests given here should yield sufficient information for a reasonable accurate evaluation of the water resisting properties of most fabrics.

The hydrostatic pressure test makes use of a new form of tester as compared to the type previously specified in the standard AATCC test. It is much smaller, easily moved about, readily constructed and offers better possibilities of controlling the temperature of the water.

The spray test is a simple and convenient method for rapid semi-quantitative control work. It measures the resistance to surface wetting under conditions simulating those of rain.

The immersion test is designed to measure the resistance of the fibers in a fabric to the absorption and retention of water.

The well known "box test" (hydrostatic pressure) has been dropped from the AATCC list of standard test methods, and the original "Hydrostatic Pressure Test" replaced by the new method described here.

Detailed descriptions of the tests and apparatus will appear in the 1941 Year Book of the AATCC, which will be published in the near future.

◆

Nation's Rayon Capacity Now 37,200,000 Pounds Monthly

Of all the domestically used textile fibers, rayon yarn has the tightest supply situation at the present time, states the current issue of the *Rayon Organon*, published by the Textile Economics Bureau, Inc. This situation prevails despite the fact that the industry is constantly stepping up its operating capacity. The supply situation, however, has reached the point where it has become necessary for producers to allocate shipments.

The operating capacity of the industry at the present time, according to the *Organon*, is 37,200,000 pounds monthly and should reach a total of 38,000,000 monthly before the end of 1941. This is a substantial increase as compared with a capacity of 32,500,000 pounds reported for the second quarter of 1940 and with 25,000,000 pounds reported for the second quarter of 1939.

Despite the increased production, demand for rayon continues on such a high level that stocks in the hands of producers continue at an extremely low level. Such stocks totaled 4,300,000 pounds on June thirtieth, equal to a half a week's supply at the current rate of shipments, compared with 5,800,000 pounds held as of May thirtieth, 12,800,000 pounds on June 30, 1940, and with 33,300,000 pounds held on June 30, 1939.

Shipments of rayon yarn aggregated 220,000,000 pounds during the first six months of 1941, a new all-time record which compares with shipments of 186,000,000 reported for the first half of 1940 and with 162,000,000 in the first half of 1939. These increases have been due somewhat to inventory depletion, but are principally due to production increases.

Shipments of rayon yarn for June totaled 38,600,000 pounds as compared with 40,200,000 pounds in May and 31,400,000 pounds in June 1940.

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Textile Men Study Personnel Problems at Blue Ridge

(*Continued from page* 70)

personnel relations in the South, but it is only by attendance that one can derive full value from it.

The following is a partial list of mills represented at the Blue Ridge Conference on Human Relations in Industry:

Bibb Manufacturing Company, Macon, Ga.; Aldora Mills, Barnesville, Ga.; American Viscose Corporation, Roanoke, Va.; American Bemberg Corporation, Elizabethton, Tenn.; Cannon Mills Company, Kannapolis, N. C.; Clearwater Manufacturing Company, Clearwater, S. C.; Cowikee Mills, Eufaula, Ala.; Abbeville Mills, Abbeville, S. C.; American Thread Company, Dalton, Ga.; American Thread Company, Bristol, Tenn.; Avondale Mills, Sylacauga, Ala.; Avondale Mills, Sycamore, Ala.; Avondale Mills, Birmingham, Ala.; Burlington Mills Corporation, Greensboro, N. C.; Chatham Manufacturing Company, Elkin, N. C.; E. I. duPont de Nemours & Co., Inc., Wilmington, Del., Waynesboro, Va., and Old Hickory, Tenn.; Davenport Hosiery Mills, Chattanooga, Tenn.; Dixie Mercerizing Company, Chattanooga, Tenn.; Drayton Mills, Spartanburg, S. C.; Gainesville Cotton Mills, Gainesville, Ga.; Hardwick Woolen Mills, Cleveland, Tenn.; Lebanon Woolen Mills, Lebanon, Tenn.; Marshall Field & Company, Draper, N. C., Fieldale, Va., and Spray, N. C.; Kendall Mills, Edgefield, S. C.; Merrimack Manufacturing Company, Huntsville, Ala.; Graniteville Manufacturing Company, Graniteville, S. C.; Pacific Mills, Lyman, S. C.; Beaumont Manufacturing Company, Spartanburg, S. C.; Pacolet Manufacturing Company, New Holland, Ga., and Pacolet, S. C.; Pelzer Mills, Pelzer, S. C.; Standard-Coosa-Thatcher Company, Chattanooga, Tenn.; Stonecutter Mills, Spindale, N. C.; Standard Knitting Mills, Knoxville, Tenn.; Spartan Mills, Spartanburg, S. C.; S. Slater & Sons, Slater, S. C.; The Trion Company, Trion, Ga.; Ware Shoals Manufacturing Company, Ware Shoals, S. C.; Whitney Manufacturing Company, Whitney, S. C.; West Point Manufacturing Company, Lanett, Ala.; Woodside Cotton Mills Company, Simpsonville, S. C.; Tennessee Eastman Corporation, Kingsport, Tenn.; Roanoke City Mills, Roanoke, Va.; U. S. Rubber Company, Hogansville, Ga., Shelbyville, Tenn., and Winnsboro, S. C.; Monarch Mills, Lockhart, S. C.; and Startex Mills, Tucapau, S. C.

◆

Loyalty

If you work for a man, in heaven's name work for him. If he pays you wages which supply your bread and butter, work for him; speak well of him; stand by him and stand by the institution he represents.

If put to a pinch, an ounce of loyalty is worth a pound of cleverness. If you must villify, condemn and eternally disparage, resign your position, and when you are outside, damn to your heart's content; but as long as you are part of the institution, do not condemn it. If you do that, you are loosing the tendrils that are holding you to the institution, and at the first high wind that comes along you will be uprooted and blown away, and probably will never know the reason why.—*Selected.*

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THE TRUST COMPANY *of* GEORGIA

ATLANTA

MEMBER
FEDERAL DEPOSIT INSURANCE CORPORATION

MEMBER
FEDERAL RESERVE SYSTEM

New Orleans, July 15, 1941

COMMENT on the COTTON MARKET

THE UPWARD MOVEMENT in cotton values has been steady since the middle of last month with only a few set-backs. New high prices were recorded on several days in succession. There were a few reactions during this period but the only one of consequence set prices back 75 points, of $3.50 a bale. The reactionary tendency was soon overcome and the market resumed its upward swing making new highs on frequent occasions. Prices at the middle of July were 186 points, or $9.30 a bale, above those of a month ago with all new crop positions above the 16-cent level.

The uplifting influences were a prolonged period of rainy weather in all parts of the belt, increasing weevil menace, tightness of spots and loan certificates, small acreage figures from the Department of Agriculture, shrinking crop ideas, inflation talk from Washington and fear that the growing crop, even with the free carry-over, will fall considerably short of meeting domestic and export requirements.

Tenders on July had no effect. The only disturbing influence of consequence was several threatening statements from the head of the OPACS after he had placed a ceiling on the price of certain textiles which was well under prevailing prices. The head of this bureau, in one of his statements, predicted that the President would soon ask for price-fixing legislation which would give the OPACS power to fix prices for most commodities, including cotton.

Announced opposition of members of the Congressional farm bloc to the program of the OPACS, especially to its plans for fixing prices on farm products, sobered the head of the OPACS, induced him to modify his views on price fixing of farm products, and postponed the threat of price-fixing legislation until the Fall. Official assurance was also given that no attempt would be made to put a ceiling on agricultural products under parity (16.12 for cotton). Advices from Washington also indicated that the Administration favors a high price level for agricultural products and that the Senate Committee now investigating the parity formula of the AAA might raise the cotton parity to 18 cents by legislative enactment.

After these developments became generally known and confidence restored, the market resumed its upward price movement and, as this is written, is well over the 16-cent mark and at the highest levels recorded on the futures boards since early in 1930.

The Crop Reporting Board estimates the acreage this year at 23,519,000. This is a decrease of 1,352,000 from last year and is the smallest planted since 1895. The board makes its crop forecasts on the acreage expected to be harvested and not on the amount planted. It will deduct 1.9 per cent from the above figure for average abandonment and will make its first estimate August 8 on an acreage of 23,102,000. Abandonment, however is reported to be above the average and the harvested acreage may be reduced considerably from the above figures as part of the planted acreage includes land planted in excess of allotments. This will have to be removed.

Some authorities are using the average yields of recent years as the basis for predicting a crop ranging from 11,000,000 to 11,750,000, a method much in vogue during the past few years. A study of yields during weevil years, however, will soon disprove the fallacy of such a method. Heavy weevil damage occurs only in years when the rainfall in May and June, and early part of July, is considerably in excess of normal. In all weevil years there was a sharp drop in yields below previous yields, or previous averages. In the accompanying table is a study of weevil on production in seven years when weather conditions were similar to those which have prevailed this season.

A study of this table shows that in all weevil years the crop suffers as great or greater loss from the weather than from the weevil. It will also be noted that heavy weevil damage usually extends over a period of three years. Reports from entomologists of all the cotton states assert the MENACE from weevil THIS year is the greatest since 1921.

The Crop Reporting Board, in calculating average yields, will use the years from 1930 to 1939, if it follows its former practice. The average yield per acre for these years is 205.6 pounds. The yield last year was 252.5 pounds. An average yield of 205.6 pounds on an acreage of 23,102,000 would give a crop of approximately 9,900,000. If the yield drops to 200 pounds the indicated yield is 9,656,000. The Board will revise its acreage for the September estimate when the excess planting will be eliminated and an estimate of the amount which will be harvested will be obtained. That report is likely to show abandonment for four per cent, indicating an acreage for harvest of approximately 22,600,000. A yield of 205.6 pounds on this acreage indicates a crop of 9,700,000 bales. If the yield drops to 200 pounds the indicated crop would be 9,446,000. Some competent observers are looking for a crop around the above figures.

Consumption of lint cotton for June was 44,000 bales less than in May due partly to reduction in power and partly to the confusion resulting from price fixing orders of the OPACS. Consumption, however, is running on the basis of 10,700,000 for the season. Exports for next season were recently estimated by the Department of Agriculture at 1,000,000. They may exceed this figure owing to prospective needs of Russia. These figures point to need of a crop of at least 12,000,000 bales to provide for domestic and export requirements.

The New York Cotton Exchange Service estimates world consumption of American cotton for the current sea-

CENSUS REPORT OF COTTON CONSUMED AND STOCKS

Consumption of Lint— Bales—	This Season	Last Season
In United States, June	875,137	565,416
In United States, May	918,902	611,636
In United States 11 months	8,789,277	7,166,051
In Cotton Growing States, June	742,792	489,191
In Cotton Growing States 11 months	7,488,516	6,111,530
In New England States, June	102,727	60,488
In New England States 11 months	1,037,010	847,721
In All Other States, June	29,618	15,737
In All Other States, 11 months	263,751	201,800
Mill Stocks		
In United States, June 30	1,918,335	1,160,912
In United States, May 31	1,927,939	1,314,792
In Cotton Growing States, June	1,522,775	903,285
In New England States, June	336,720	204,619
In All Other States, June	58,840	53,008
Warehouse Stocks		
In United States, June 30	10,570,235	9,576,683
In United States, May 31	11,358,417	10,091,517
In Cotton Growing States, June	10,171,354	9,516,166
In New England States, June	375,432	51,304
In All Other States, June	23,449	9,213
Active Cotton Spindles		
In United States, June	22,991,546	21,954,616
In United States, May	22,980,286	22,213,378
In Cotton Growing States, June	17,344,526	16,826,230
In New England States, June	5,026,140	4,523,988
In All Other States, June	620,880	604,398
Exports for June	75,236	133,530
Exports for 11 months	1,050,776	6,054,961
Imports Foreign Cotton 11 months	175,628	149,860

CONSOLIDATED MOVEMENT OF COTTON AS OF JULY 15, 1941

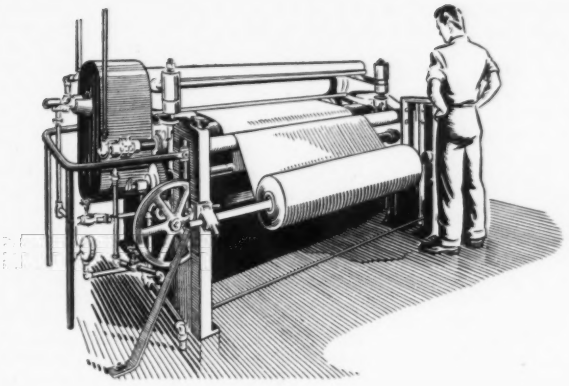
Compiled by New Orleans Cotton Exchange

MOVEMENT SINCE AUGUST 1, 1940

	This Year	Last Year
Received at Ports	3,828,406	7,659,031
Exports to Great Britain	382,448	2,002,424
Exports to France		836,886
Exports to Continent	431,540	2,071,814
Exports to Central & South America	33,196	60,564
Exports to Orient	214,459	1,392,495
Total Exports	1,061,643	6,364,183
Stocks in New Orleans	477,408	568,823
Stocks at All Ports	3,291,915	2,444,346

LOSSES IN WEEVIL YEARS ACREAGE ABANDONED & YIELDS PER ACRE

Year	LOSSES From Weevil	From Weather & Other Causes	% Abandoned	Yield per Acre
1921	31.2	21.7	3.7	132.5
1922	23.3	21.9	2.9	139.2
1923	19.2	26.6	4.1	137.7
1927	18.5	20.2	4.2	161.7
1928	14.1	22.3	3.4	162.3
1929	13.3	30.5	2.7	164.1
1932	15.2	27.5	1.2	173.5
Average	19.3	24.4	3.2	153.1



Finer crepe effects with new Embossing Calender

"The crepe effects we are getting on artificial silk are the envy of our competitors.

"Never before have we achieved such excellent embossed finishes.

"And here's why . . .

"We have installed a new Butterworth 2-Roll Embossing Calender equipped with air cylinders for applying pressure at slight extra cost. As a result, pressures are absolutely true and even. The finish on our merchandise is always the same.

"We have found air cylinders for applying pressure better than micro-set and a decided improvement over hydraulic. Pressures are recorded while the machine is operating.

"A special steam box at the entering side of the Butterworth Calender gives artificial silk the right *start* for a good *finish*."

Consider the beneficial effects this *one* modern machine is exerting over the affairs of this plant.

Orders for the most difficult embossed finishes are eagerly sought. There is confidence that the exact finish can be supplied, that deliveries can be met—that the cost of production will come within the figure on which quotations were based.

Don't wait to modernize your entire equipment at one time. Put in a modern machine wherever and whenever you can. Each will prove itself a highly worthwhile investment in its own right and a step toward having a 100 per cent modern plant with which to face after-the-boom competition.

For 121 years we have specialized in designing and building machinery for the wet end of the Textile Industry. Our salesmen are qualified to advise you as to the kind of machines and kind of plant arrangement which will increase quality, up production and reduce costs. Consult us freely without obligation.

H. W. BUTTERWORTH & SONS CO.
Phila., Pa., Serving the Textile Industry Since 1820.
Offices: Providence, R. I. and Charlotte, N. C. In Canada—W. J. Westaway Co., Hamilton, Ont.

***64%**

of equipment now in use in the wet end of textile finishing cannot operate at a profit in competition with modern machines.

*Proved by Research

Butterworth

son ending July 31 at 11,936.000 bales compared with 12,876,000 in the previous season and carry-over at 13,062,000 bales compared with 12,692,000 at the end of the previous season and 14,137,000 in July 1939. They estimate that of the 13,062,000 carry-over, 825,000 bales will be located in foreign countries and the other 12,237.000 in the United States; and that the Government holdings of that date will amount to 6,616,000 bales. Destroyed cotton of 125,000 bales is deducted from the carry-over. Consumption of foreign growths is estimated at 14,253,000 bales compared with 15,535,000 in the previous season. It is estimated that 100,000 bales of this cotton were destroyed. The carry-over is estimated at 9,909,000 bales compared with 7,762,000 for the previous season. World production of all kinds is estimated at 28,931,000 bales and consumption at 26,189,000. The carry-over of all kinds is estimated at 22,971,000 compared with 20,454,000 last season.

The Commodity Credit Corporation reports that up to July 5, 3,179,843 bales went into the 1940 loan and that 2,346,197 have been withdrawn leaving stocks on hand of 833,646. It is stated, however, that loans on 519,321 bales have been repaid but the cotton has not been withdrawn. This leaves net stocks in that loan of 314,325. Net holdings of the 1938 crop on that date are given as 666,620. In addition the Commodity Credit Corporation owns outright 6,116,482 bales. Farmers have until July 31 to withdraw their cotton. After that the Commodity Credit Corporation is expected to take over the remnant. Loan certificates are scarce and recently have been selling for $25 a bale in central sections. Officials of the Commodity Credit Corporation have expressed the opinion that 5,000,000 bales of the new crop will go into the loan. Reports from the interior indicate that producers will demand $5 a bale over and above the loan.

Nothing has come out of Washington recently regarding the loan rate or the differentials. Both are expected to be announced about August 1. The differentials are expected to be based on southeastern mill points.

What the Southern Mills Are Doing

Work is well underway on the one-story extension to the Pepperton Cotton Mills, Jackson, Ga. The new building is to be 66x104 feet.

Staunton Textile Corporation has made application for charter. Incorporation will cover the plant to be erected at Staunton, Va., for the Celanese Corporation of America.

Lowell Bleachery South, Griffin, Ga., has started work on the construction of a one-story addition, 50x210 feet, which will cost with equipment approximately $6,000.

Architect's plans have been drawn for enlarging and remodeling the office building of the Shawmut (Ala.) Division of the West Point Manufacturing Company. Cost of improvements will be approximately $10,000.

Central (S. C.) Mills have installed 15 new Saco-Lowell card and 8 Saco-Lowell long draft spinning frames. This is all part of an expansion program.

Perfection Mills, Inc. Weldon, N. C., which have been closed for some time, will resume operations in the near future. F. H. Gregory, president, has acquired the interest of W. T. Shaw and several local business men have acquired the remaining stock.

Mills Mill, Woodruff, S. C., is constructing a new brick office building.

Bama Cotton Mills, Enterprise, Ala., has constructed a modern office building, having tile floors, fluorescent lighting, and a large reception room.

At Riverside and Dan River Cotton Mills Company, Danville, Va., the offices of the Riverside division and the Schoolfield division are being consolidated. The old Riverside office will be rented for commercial purposes.

Esmond Virginia, Inc., is the name of a new plant at Waynesboro, Va., which went into operation July 15, producing blankets. The plant is located in the building vacated by Stehli Silk Corporation. Robert Whitman, Bedford, N. Y., manager of the mill, said that a production of 6.000 blankets a week will be reached with the present equipment.

Precision Finishing Machine Corporation is the name of a new concern located at Lynchburg, Va. The plant will produce machine equipment for the decoration of fabrics, replacing hand silk-screen methods, it is said, and will also do this type of work. For the present, the company will specialize in decorating acetates, nylon, oil silk papers, leather, glider cloth and certain cotton materials.

Stanley Mills, Inc., Stanley, N. C., will have alterations and repairs made on the plants.

Monroe (Ga.) Cotton Mills, with J. E. Sirrine and Company as consulting and designing engineers, will build a 3-story addition 55x220 feet containing 36,000 square feet of floor space. It will include two new stairwells and toilet towers and one new elevator hatch. The building will have brick walls, steel sash, cast iron columns, wooden beams and flooring, and a 20-year tar and gravel roof.

Sayles-Biltmore Bleacheries, Inc., Biltmore, N. C., has installed a new 80,000 pounds per hour boiler purchased from Foster-Wheeler Corporation. A new multiple retort stoker was also purchased from the American Engineering Company and installed at the same time. This is part of an extensive half-million dollar modernization program planned by J. E. Sirrine and Company, Greenville, S. C.

An official of Excelsior Mills, Union, S. C., has made known that a woolen mill will be established in Union, with between 200 and 250 persons to be employed. A training program in weaving and spinning will be instituted to familiarize workers with the manufacture of woolen cloth.

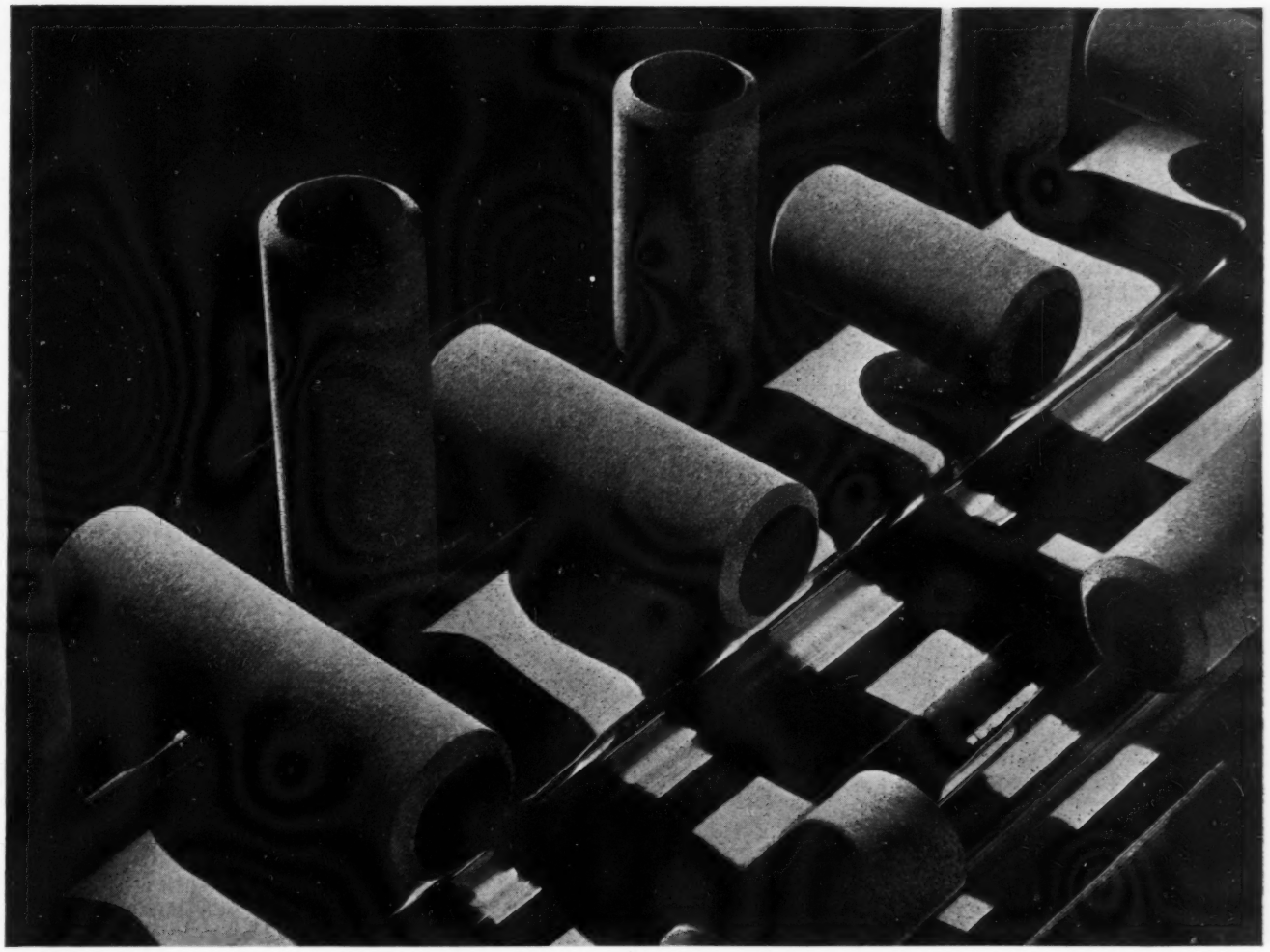
Amazon Cotton Mills, Thomasville, N. C., are making expansion plans, which will include a 3-story addition to the waste house at a cost of between $40,000 and $50,000, and a 2-story office building costing about $30,000. Plans for the waste house addition were drawn by P. N. Peas & Co., Charlotte, N. C.

Minneola Manufacturing Company, Gibsonville, N. C., is undergoing a modernization program which includes 48 new Whitin spinning frames, 10 interdraft changeovers in the carding department, and a number of new drawing frames. The company has also made improvements to its present equipment. The capacity of the mill will be increased with the new machinery.

The West Point (Ga.) Manufacturing Company has acquired the Mallison Braided Cord Company, Athens, Ga. This plant is listed as having about 2,100 spindles, 8 looms and 148 braiders.

Commercial Standard for Moisture Regains of Cotton Yarns

U. S. Department of Commerce, National Bureau of Standards, Washington, D. C., has prepared "Commercial Standard for Moisture Regains of Cotton Yarns, CS11-41", which is now a recorded standard of the industry, effective as a basis for calculating invoice weights and adjustment of claims from August 1, 1941.



THE MILLS "ON TOP" ARE THE MILLS ON CORK

TODAY, with orders piled sky-high, the chief concern of America's textile mills is *maximum production*. It is no matter of chance that the vast majority of mills that are making outstanding production records today are spinning on cork. The physical properties of Armstrong's Cork Cots are enabling these mills to operate more than 8,500,000 spindles at top speed and efficiency—with little loss of production due to roll covering replacements and with better running work.

Five characteristics of cork account for its ability to spin a stronger, more uniform product—for a longer time. Cork's high coefficient of friction produces uniform drafting with minimum slippage . . . drafts out bulky roving . . . eliminates eyebrowing. Cork's resilience enables it to "come back" after being grooved by top roll laps and hard ends. Cork's freedom from lateral flow helps maintain a truer drafting surface. Cork's resistance to liquid penetration prevents shrinking or stretching during humidity changes . . . cuts down damage from oil or dye absorption. Cork's durability means that these cots retain their important advantages throughout long periods of service.

Top production demands top service—and "Armstrong Service" is ready to aid you through the complete facilities of our sales, research, and engineering departments. Our staff of trained textile specialists is always ready to work with you toward the solution of any operating problem. See your Armstrong representative or write to Armstrong Cork Co., Textile Products Section, 923 Arch Street, Lancaster, Pa.

ARMSTRONG'S *Extra Cushion* SEAMLESS CORK COTS

CORK PRODUCTS SINCE 1860

NEW EQUIPMENT and MATERIALS

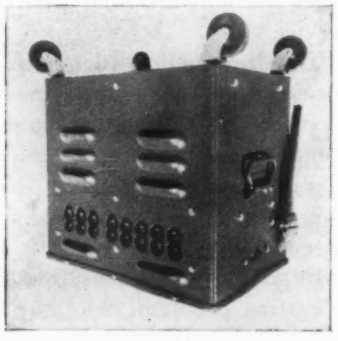
New Spinning Frame Bunch Builder

Whitin Machine Works, Whitinsville, Mass., has announced a new bunch builder for spinning frames that is said to be simple in design and positive in action. Outstanding features of the new bunch builder are listed as (1) Makes a uniform bunch that will not slough-off. (2) makes a uniform bunch regardless of the doffing point. (3) gives control of yardage in bunch, which may be set from one to 30 yards as required (4) control of width and location of bunch (5) bunch may be covered or left exposed as desired (6) automatic and smooth operation with minimum strain on cam shaft (7) will operate with either direction of cam rotation (8) proper functioning when cam face is reversed and (9) has ready application to all types of Whitin builders.

◆

Midget Welder; Enclosed Circuit Interrupter; Plastic Keeps Instrument Dials White

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has announced three new products. The first of these is a new midget Flexarc welder for use in welding light gauge metal, castings and drive shafts and for general maintenance work. The arc welder comes complete with all acces-



sories, including the primary cable for hooking up the power line. It permits sensitive adjustment of the welding current over a range of from 20 to 140 amperes. 14½ x 12⅛ x 20 inches long, it weighs 160 pounds.

A new De-ion circuit interrupter announced by the company has high interrupting capacity and reduced mounting space. It is known as NEMA Type 1A and is designed to replace non-automatic disconnecting devices in industrial plants, central stations, substations and locations where enclosed unfused safety switches might be applied. Safety features include a cover with interlock which prevents closing of contacts when cover is open, and opening of cover when interrupter is in on position.

By means of a recently developed liquid plastic material, which is sprayed on metals much the same as a lacquer or paint, white instrument dials are no longer discolored by high temperature, light, chemical fumes or moisture, according to Westinghouse authorities.

◆

Low Cost Instant Heater

Johnson Corporation, Three Rivers, Mich., has designed a new all-steel, lower cost version of the company's instant water heater, used to heat water and other liquids with steam, and it can be hooked up to high pressure steam lines without any need for reducing valves. Design and construction are exactly the same as in the original Johnson copper tube heaters. This new heater is designed to supplement rather than replace the copper tube heater. However, the steel heater is suitable for many applications and for any given duty is said to offer the advantage of lower cost. It may be used for heating water, various oils and process liquids, for booster service, for pre-heating boiler feed water, etc. It is available in a wide range of sizes.

◆

Patents Granted

According to Eaton and Brown, patent attorneys, Charlotte, N. C., three patents have been assigned to William H. Bahan of Greenville, S. C., and another assigned to Bahan Textile Machinery Company of the same city. All relate to loom devices.

Two of the patents are for tension let-offs for warp beams in a loom, by which a paddle wheel is geared to the warp beam and this runs in a casing having movable or fluid material therein and by regulating the depth at which the blades submerge into the movable material the amount of resistance offered to the turning of the warp beam is regulated.

One of the let-off patents has means whereby the amount of resistance to the turning of the warp beam is automatically regulated by the size of the warp remaining in the warp beam.

Another patent relates to a warp roll stand bracket made in a plurality of parts whereby minute adjustment of the warp roll cam arm can be made.

Still another patent relates to a warp roll cam arm having a bolt confining an elongated polygonal piece of wood thereon, which wood engages the cam. The wood member can be adjusted from time to time to present a new wearing surface to the whip roll cam.

◆

New Fast Oil Paint

Wilbur & Williams Co., Park Square Bldg., Boston, Mass., have announced the development of Bondlite, an oil paint, which, it is explained will safely paint over new damp plaster or brick, concrete, cement or stucco only a day old. It is available in both an interior and an exterior mixture. The manufacturers state it is not affected by lime or alkali, and does not seal in moisture, allowing it to dry out naturally.

◆

Deodorant

Oakite Products, Inc., 57 Thames St., New York City, have developed Oakite Deodorant No. 1, a triple-action material combining deodorizing, detergent and disinfecting properties, for use in maintaining proper sanitation standards in washrooms and related plant facilities. A dry, white, free-flowing, odorless powder, used in cold water, the new material, it is explained, dissipates and neutralizes odors, provides dirt and grime removal action on cement, tile and porcelain surfaces; and its disinfecting properties are said to help provide added protection against harmful organisms.

◆

Time Cycle Controller

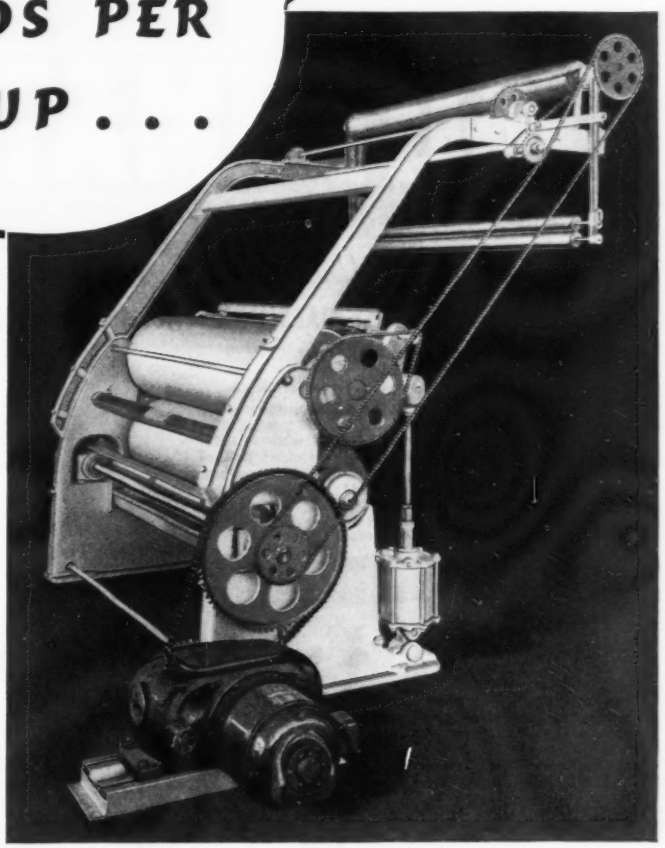
The Bristol Company, Waterbury, Conn., have developed a new multiple-cam time cycle controller, known as the Model A-118 impulse-sequence cycle controller for timing mechanical operations in industrial processes, where a number of factors must be accurately timed according to a fixed program. It actuates or engages, at the correct time for each cycle, the necessary mechanical, electrical, or pneumatic devices for automatically carrying out the intended schedule.

◆

Synthetic Wetting Agent

Rohm & Haas Company, 222 West Washington Square, Philadelphia, Pa., has announced a new synthetic wetting agent known as Triton E 79, which is said to be valuable for its wetting-back properties. When dried into a fabric it is said to make subsequent wetting-back faster and more complete. The

HOW TO EXTRACT MOISTURE FROM CLOTH UNIFORMLY AT SPEEDS FROM 45 YARDS PER MINUTE AND UP . . .



For the Plant . . SEEKING more uniform extracting with a higher percentage of moisture removed from all woven fabrics, the economical solution will be found in the new Hunter Model G Pneumatically Controlled Squeeze Rolls.

THIS new model may be used as a separate unit, in combination with a scutcher, in continuous cloth carbonizing or washer lines, on tracks in wet finishing rooms, or in front of cloth tentering machines.

It is adaptable to any woven fabric, either flat or pile type, cotton, rayons, woolens, worsteds, and blended or manipulated fabrics. It will extract cloth down to 50% to 60% moisture content on the dry basis at continuous running speeds of over 25 yards per minute.

For complete details of individual applications of the Hunter Pneumatically Controlled Squeeze Rolls in a variety of plants, write

JAMES HUNTER MACHINE COMPANY

FOUNDED 1847 • NORTH ADAMS, MASSACHUSETTS

Western Representative: **E. G. PAULES, 343 Bendix Bldg., Los Angeles, Calif.**

new product is unusual in that it is both oil and water soluble, making it useful in the preparation of oil and water emulsions. It also has excellent wetting and cleaning properties.

◆

Wider Laminum Shim Stock Available

Laminated Shim Company, Inc., Glenbrook, Conn., is now able to furnish material so that larger one-piece shims can be cut from Laminum shim stock. Sheets of Laminum shim stock can be furnished in 7x36-inch dimensions in addition to the 6x36-inch sheets produced heretofore. This new size affords a convenience to purchasers of shim stock who cut their own shims. The sheets are available in overall thicknesses from .006 to .125 inch.

◆

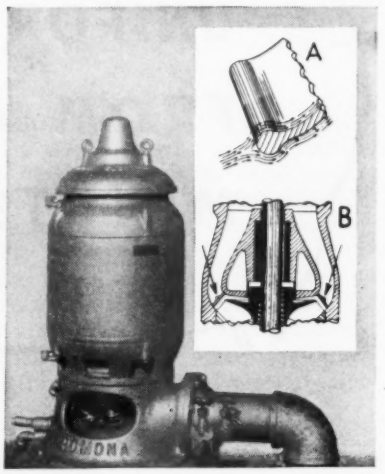
For Smoke Control

Rehtron Corporation, 2159 Magnolia Ave., Chicago, Ill., has made available an electric eye smoke indicator and combustion control which operates with any type boiler, any kind and grade of fuel, stoker or hand-fired coal or oil burners. The device operates so as to detect instantly an increase over maximum allowable density in smoke and provides for immediate bell and/or light signal so that the fireman can give attention and apply corrective measures.

◆

Pump Design Eliminates Hydraulic Losses

Pomona Pump Company, St. Louis, Mo., and Pomona, Calif., has been granted patents covering design improvements which are said to eliminate



hydraulic losses in pumps, thereby increasing their efficiency as much as 10 per cent. These improvements are now included in all sizes of Pomona vertical turbine pumps and involve fundamental design changes in the guide vanes, function of which is to alter, from horizontal to vertical, the flow direction of fluids being pumped. With the new design greater uniformity of flow pattern is secured, friction is reduced and efficiency of fluid lift is increased, it is said. For existing pumps it is only necessary to substitute a new bowl assembly to apply the improvement.

◆

Inventory Policy Booklet

Industrial Research Department of the Wharton School of Finance and Commerce of the University of Pennsylvania has prepared under the auspices of The Textile Foundation, Washington, D. C., a booklet entitled "Minimizing Inventory Losses in the Men's Wear Division of the Wool-Textile Industry". This is the second of a series of seven studies which the Industrial Research Department has prepared under the general title of Inventory Policies in the Textile Industry. Others in the series deal with inventory management in the denim, cotton fine goods, rayon weaving, cotton printcloth and full-fashioned hosiery industries. The final number will summarize the six industry reports and discuss inventory trends in the production and distribution of textiles. Price per copy 50 cents; entire series $3.00.

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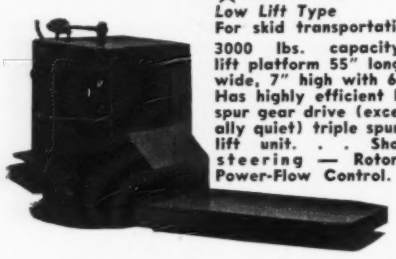
Manufacturers for Over Thirty Years

MODERN *Electric Propelled* INDUSTRIAL TRUCKS

FOR ECONOMICAL MATERIALS HANDLING IN THE TEXTILE INDUSTRY

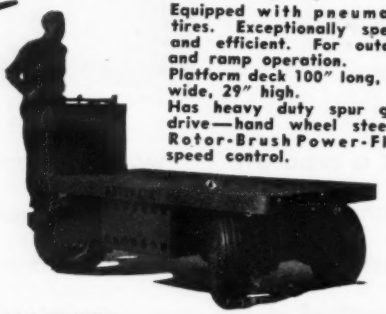
★ LIFTING
Low Lift Type
For skid transportation
3000 lbs. capacity—has lift platform 55" long, 27" wide, 7" high with 6" lift. Has highly efficient helical spur gear drive (exceptionally quiet) triple spur gear lift unit. . . Shockless steering — Rotor-Brush Power-Flow Control.



★ TIERING
High Lift Type
3000 lbs. capacity has platform 55" long, 26" wide, 6" high with 60" lift.
Drive unit has highly efficient helical spur gear reduction. Platform raised and lowered safely by two roller chains sprocket driven from powerful gear unit. . . Shockless steering — Rotor-Brush Power-Flow Control.

★ STACKING
Use your *full* vertical storage space—stack unit loads on pallets—eliminate re-handling—simplify inventory—speed up production—use the "AUTOMATIC" Fork Truck System.
Capacities 1000 and 2000 lbs.
Telescopic Lift 120" Uprights collapse to 83"
Truck is exceptionally compact, will maneuver easily in congested areas also lightweight for min. capacity elevators.
Get Full Details

★ LOADING
Platform Type
4000 lb. capacity.
Equipped with pneumatic tires. Exceptionally speedy and efficient. For outdoor and ramp operation.
Platform deck 100" long, 51" wide, 29" high.
Has heavy duty spur gear drive—hand wheel steer—Rotor-Brush Power-Flow speed control.



★ HAULING
For every hauling purpose. Tractor is exceptionally compact and powerful. Has 1000 lbs. Max. hauling D. B. P. Two wheel steer. Quiet drive. Rotor-Brush Power-Flow control.

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AUTOMATIC TRANSPORTATION CO.
Div. of the Yale & Towne Mfg. Co.
67 W. 87th St. CHICAGO, ILL.

Leak-less Lubrication of Rolls on Long Draft Frames

NON-FLUID OIL stays in bearings and off yarn—does not creep out onto leather or cork cots like ordinary oils. That's why 7 out of 10 mills use NON-FLUID OIL for top and bottom rolls and saddles of spinning frames.

By outlasting oil 3 to 5 times, NON-FLUID OIL effects further savings on lubricant and application cost.

Write today for free testing sample and bulletin, "Lubrication of Textile Machinery"

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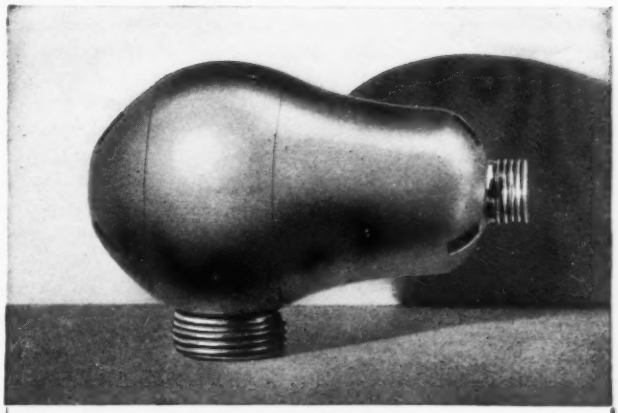
TRADE MARK REGISTERED
NON-FLUID OIL
U.S. PAT. OFFICE & FOREIGN COUNTRIES

MODERN TEXTILE LUBRICANT

Better Lubrication at Less Cost per Month



So . . . You Too
Are Thinking About Atomizer Humidifiers

If prone to kidney trouble—or early change of life—any atomizer is apt to be temperamental.

Consider what atomizers are bought for—months, yes years of reliable performance. Continuously reliable. No falling off in capacity. No premature senility.

Consider the quality of moisture—spray so fine it is absorbed by room air before anyone thinks about it as spray.

Consider simplicity. Consider day by day—and long range efficiency in the use of compressed air. Consider atomizers that demand no coddling, no fussing over, no adjusting—atomizers so reliable, they are just taken for granted.

Parks Turbomatic Atomizer Humidifier

Self-cleaning Non-adjustable

Parks-Cramer Company

Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

Cotton Concrete Curing Mats

Extensive tests, sponsored by the U. S. Bureau of Public Roads, show that the use of cotton quilts result in better concrete of higher compressive strength, than when treated or cured by the former method of using jute mats for curing.

Scarcity of war-blockaged foreign jute burlap provided the necessary impetus to try out the new cotton blankets. It is said that when cotton mats are used, they need stay in place only 72 hours, and that further the cotton quilts need less attention because they hold water longer than burlap sheets, and cotton needs be dampened far less often.

With the new roads, airport runways, gun emplacements, etc., being built at this time, it is possible that quite a bit of cotton may be turned into this line of work.

The development of all-cotton curing quilts began in 1936 when a relatively small sum of money was made available to the Secretary of Agriculture for experimentation in new uses for cotton, and it quickly became apparent that cotton quilts outlast burlap as much as four to one, being capable of re-use over and over again up to 150 times when dried and stored properly when not in use.

Cotton mats consist of a sturdy cotton osnaburg filled with cotton batts, made of waste or low grade fiber, weighing 12 ounces per square yard. The mats are cross-stitched to hold the padding in place and are made in any size required, the most common being 6x12 feet. They are laid directly on the poured concrete, or in the case of walls, fastened over the exposed surfaces and thoroughly soaked with water. Thirty-eight state highway departments have approved their use.

◆

Obituary Items

JOHN W. FARRINGTON, 47, New England subscription representative of COTTON, passed away on July 5, in Worcester, Mass., his home, following a heart attack sustained while swimming.

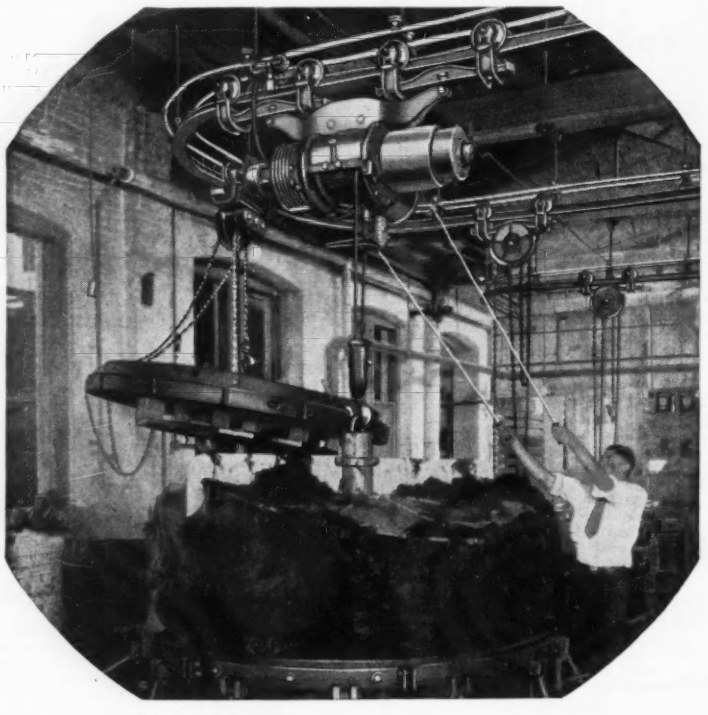
FRITZ QUITTNER, 67, vice-president and general manager of the Merion Worsted Mills, West Conshohocken, Pa., passed away at his home in Jenkintown, Pa., recently after a two-month illness. At one time he was president of the Roosevelt Worsted Mills and had been connected with the Centerdale Worsted Mills of Providence and S. B. & B. W. Fleisher, Inc.

RONALD J. MCNAMEE, 39, general manager of the Ballston Spa Woolen Mills, Ballston Spa, N. Y., passed away during June after a long illness.

WALTER L. COURSEN, former president of Tubize Artificial Silk Company of America, passed away June 25 at the age of 63. Mr. Coursen retired from active business shortly before the Tubize Artificial Silk Company of America was merged with the Tubize Chatillon Corporation in 1927.

HERBERT LYMAN, chairman of the board of directors of Merrimack Manufacturing Company, and president of Whittenton Manufacturing Company, passed away suddenly in Boston on June 15 at the age of 77. His home was in Milton, Mass.

CHARLES W. JOHNSTON, chairman of the board of Highland Park Manufacturing Company, and president of 10 other cotton mills and one commission firm, passed away July 4 at the age of 79. He had been active 57 years in the textile industry. He was also president of the following mills, Anchor Mills Co., Cornelius Cotton Mills, Brown Manufacturing Co., Union Mills Co., Worth Spinning Co., Park Yarn Mills Co., Eastern Manufacturing Co., Monroe Mills Co., and Spinners Processing Co.



For **BIGGER PROFITS IN THE DYE HOUSE**

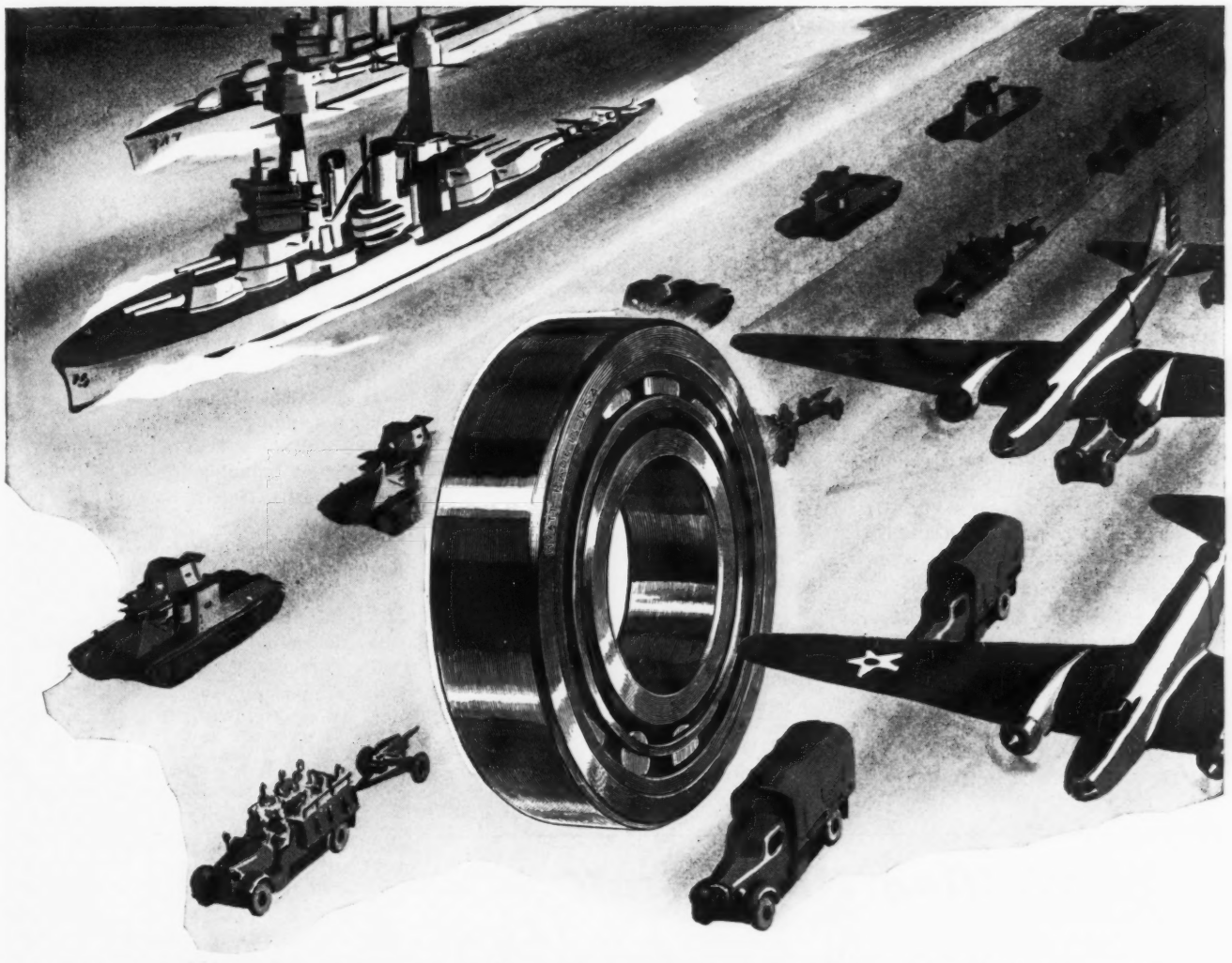
Methods for dyeing new wool in the dye house have been modernized by Cleveland Tramrail.

An entire kier charge may be lifted, allowed to drip, and passed to the squeeze rolls and dryer by one man. Electric hoists handle the heavy material loads and hand-chain hoists lift and move the kier covers.

Cleveland Tramrail makes possible *bigger* profits, not only in the dye house, but in all departments of the textile industry.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
1175 East 283rd Street Wickliffe, Ohio

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT
Other products: CLEVELAND CRANES and STEELWELD MACHINERY



MECHANIZED and HYATTIZED FOR DEFENSE!

★ Tanks and trucks, airplanes and armored cars, gun mounts and gun carriages . . . *as well as the machines that help build them* . . . depend on Hyatts, and Hyatt Quality, to carry the load and guard against wear.

These many duties of Hyatts . . . in the basic raw material industries, *in the machines that make defense equipment, and in the defense equipment itself* . . . keep our men and our plant working at peak capacity to fill vital defense contracts and regular production at the same time.

Yes, we are producing as never before, but always maintaining the traditional standards of Hyatt quality for the bearings of America's defense equipment on the front line as well as in the field and factory, mine and mill, highway and railway that back it up. Hyatt Bearings Division, General Motors Sales Corporation, Harrison, New Jersey; Chicago, Pittsburgh, Detroit and San Francisco.

HYATT ROLLER BEARINGS

Carry the Load!

PERSONAL NOTES
About Men You Know

A. D. ELLIOTT has resigned as superintendent of the cotton mill of The Trion Co., Trion, Ga., to become assistant general superintendent of the Pacific Mills, Columbia, S. C., where H. A. NEWTON recently succeeded W. P. HAMRICK as general superintendent. J. HARMON STRAIT, formerly overseer of weaving at the Pepperell Mfg. Co., Biddeford, Maine, has been made superintendent of weaving at the Pacific plants in Columbia, and A. R. HILL, formerly of Riverside & Dan River Cotton Mills, Danville, Va., is superintendent of carding and spinning.

R. P. HARDEMAN, for the past several years assistant superintendent at Trion, has been made superintendent there, succeeding Mr. Elliott.

J. O. CORN, formerly superintendent of Pacific Mills, Columbia, S. C., has become superintendent of Jackson Mills No. 3, High Shoals, N. C.

L. E. LANE, formerly assistant manager, Bemis Bro. Bag Co., Talladega, Ala., has become superintendent of Piedmont Cotton Mills, Egan, Ga., succeeding J. B. OLIVER.

W. P. CRAWLEY has resigned as instructor in weaving and designing at the textile school of N. C. State College, Raleigh, to accept a position as textile engineer with Tennessee Eastman Corporation, Kingsport, Tenn. Mr. Crawley was graduated at State in 1938 and since then has had practical experience with Burlington Mills Corporation at the Radford, Va., plant.

WILLIAM C. FRIDAY, son of D. L. FRIDAY, of Cocker Machine and Foundry Company, Gastonia, N. C., has accepted a position with duPont at the Waynesboro, Va., plant.

HAROLD W. WHITCOMB, formerly assistant production manager of the manufacturing division of Marshall Field & Company, with headquarters at Spray, N. C., has been appointed superintendent of retail manufacturing services for the company with headquarters in Chicago. W. L. MCLEAN has been made manager of procedures, systems and methods in the comptroller's division.

O. H. HANKINS, formerly with Drayton Mills, Spartanburg, S. C., has become overseer of carding at Ranlo Mills, Gastonia, N. C.

J. H. HADDOCK has resigned as overseer of spinning at the Texas Textile Mills, McKinney, Texas, and is now overseer of spinning at the Werthan Bag Company, Nashville, Tenn.

H. W. KISER has been made superintendent of Drayton Mills, Spartanburg, S. C., succeeding SMITH CROW, resigned. Mr. Kiser has been in charge of several spinning mill units for Burlington Mills; previously he was superintendent of Watts Mill, Laurens, S. C., and Aragon-Baldwin Mills, Whitmire, S. C.

JOE F. CHALMERS, general superintendent of Mathews Cotton Mill, Greenwood, S. C., has been appointed also general superintendent of Greenwood (S.C.) Cotton Mill.

DONALD COMER, chairman of the board of Avondale Mills of Alabama, has been reappointed by President Roosevelt as a member of the board of directors of The Textile Foundation for a term of four years.

WARREN E. BAKER has resigned as divisional superintendent of the Apponaug (R.I.) Company, a position which he has held for the past 2½ years. He will take up work in a broader field, dividing his time between mill production and the New York market.

E. D. JOHNSTON, formerly associated with the Dunn Woolen Company, Martinsburg, W. Va., has been made superintendent of the American Woolen Company's plant at North Vassalboro, Me.

CHARLES FOWLER has been promoted to general manager of Hartford Rayon Corporation, Rocky Hill, Conn. He formerly was associated with the National Silk Spinning Company and before that was with the Lorraine Manufacturing Company.

CARL L. MANGUM, formerly superintendent of the Birmingham, Ala., plant of Avondale Mills, has been made superintendent of the Birmingham (Ala.) Textile Company.

Waiting Room Stuff

Dewey Carter (Carter travelers, Gastonia) is back after a month in Hollywood and other Pacific Coast points. Dewey said it was for business and pleasure, but didn't say what kind of business.

•

To Andy Anderson and Harry Curtis (Carolina Specialty Co., Charlotte): It's rumored around that you boys are doing a land-office business on rayon slashers. That's the kind of news we and your "Uncle" like to hear.

•

That bald pate you saw in Dodge Mfg. Corp.'s ad (page 17, May issue), belongs to George Woolley. Shiny, wasn't it?

•

Harry Begg (Charlotte), who sells jewelry and golfing equipment to most of the textile fraternity in the Carolinas, is a native of Scotland and used to shoot grouse where the farmer caught Rudolf Hess. Stop by and hear the Scotchman tell it.

•

Frank Burke (southern manager, Lambeth Rope Co., Charlotte) is back after three weeks clamming around Mass., his old home state. Arthur O'Leary carried on by remote control from Myrtle Beach while Frank was away.

•

Lang Ligon (Abbott Machine Co., Greenville), says while on a recent visit to the home office in New Hampshire, he made an excursion into the Maine woods to find that rare species of bird that Frank Lockman told him about.

•

Fred White and Walter Watt (Abington Textile Machine Co.) are now located in larger quarters at 1019 Johnston Bldg., Charlotte. The grapevine tells us these boys are doing a whale of a business on card strippers and knotters.

•

If your line is weave room equipment, and you didn't get enough talking points at that last sales meeting, go see Marshall Paine at Cannon in Kannapolis. Marshall knows weaving from A to Z and can change a shuttle with his feet, but being modest he won't admit it.

•

Stop by Olney Paint Co., at Spartanburg, S. C., and ask for Bob. If they tell you he is in Knoxville, then look for him in Greenwood. Who trained your staff, Bob?

•

We know another paint salesman who used to wear false whiskers when registering in hotels so his competitors wouldn't know when he was in town.

•

A fellow we think would look good in a pirate's costume is Bert Macintyre (National Oil Products Co). Bert has a charming swagger to go with it. Yeah, we said swagger.

•

Genial Ed (see-me-the-next-time-you-are-in-town) Hutchison, buyer for American Yarn & Processing Co., and friend of all traveling salesmen, has recently been elected Mayor of Mount Holly, N. C. How about fixing this ticket, Your Honor?

•

To Preston Tinsley: Now that you have opened offices for Warner Chemical Co. in the Woodside Building at Greenville, have you obtained field glasses, or are you on the wrong side of the building?

•

That big object in the surf at Hampton Beach which caused considerable excitement the first two weeks in August turned out to be George Bahan (Bahan Textile Machinery Co., Greenville). George says he will be back September 1st.

•

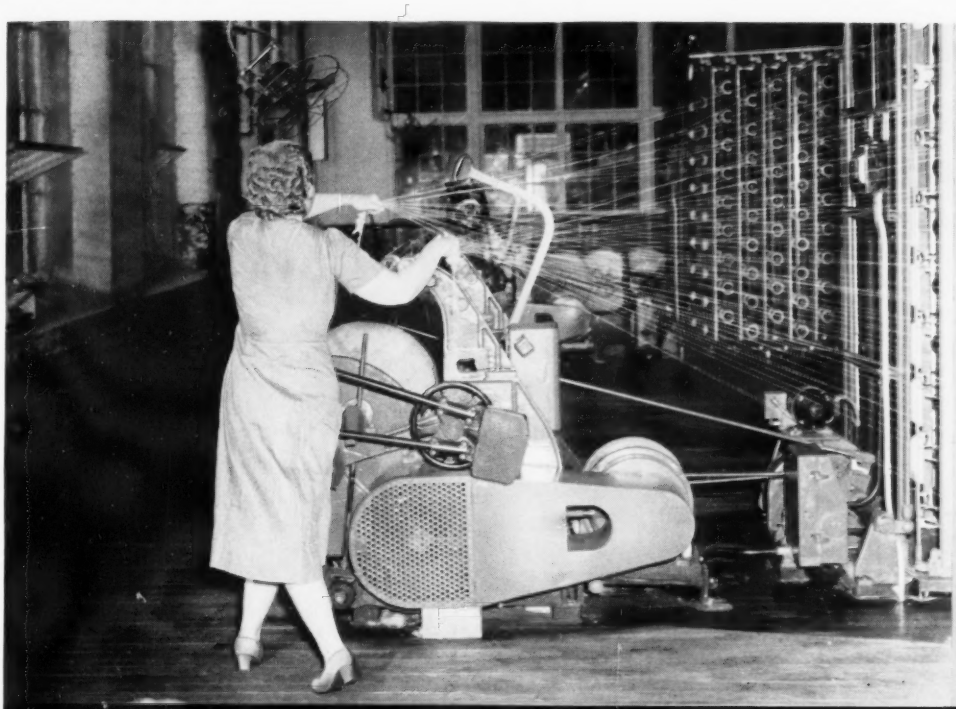
Did you hear about the new salesman who saw Falls Thomason standing in the Mecklenburg Hotel lobby and right away wanted to know what time the meeting would start?

•

Ask Sam Zimmerman and Louis Batson about the time they ordered soda water in that little Tennessee hotel and the boy brought them baking soda and a glass of water.

•

The boys traveling Georgia and Alabama report that the working schedules the mills are observing under the power curtailment are even more confusing than daylight saving time. However, we have heard of only one of them making calls on Sunday. Pierce Baker, textile engineer for Texas Company, got out of bed one Sunday night (to be exact, 3:00 A. M. Monday) to see how weekend operation was going at one mill.



BARBER-COLMAN SYSTEM OF SPOOLING AND WARPING

CONVENIENCE for the OPERATOR

Accuracy and Efficiency Improved by Warp Comb Construction

The operator brings forward as many as eight rows at a time. The special, and exclusive, Barber-Colman comb is divided into saw-tooth groups, one for each row. With a simple turn of the wrist, the nine ends in each row are set into the comb. Checking is easy and accurate. This is only one of many details designed to help the operator do better work, faster and more easily. For greater production with less effort, use the Barber-Colman System.

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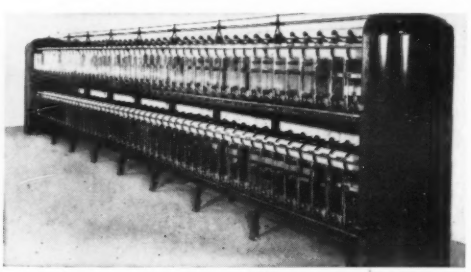
A GOOD NUMBER TO REMEMBER

when you or your customers are calling for better silk, rayon or combination yarns and more of them per day at lower cost per pound.

Model 110, designating the most advanced design of Atwood Twister, is destined to become as well and favorably known as the famous Atwood *"5B"*.

Already it has established a brilliant record of performance under today's most exacting conditions.

If you haven't looked into the *Model 110* and its money making and money saving possibilities on *your* yarn production, *now is the time.* For full information get in touch with our nearest office.

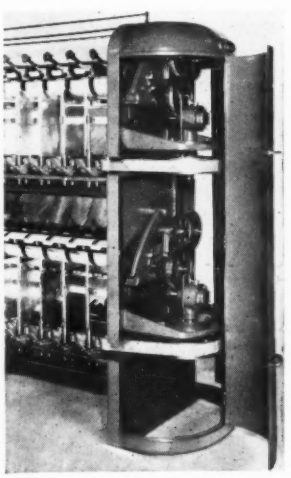


The Atwood Model 110 Twister designed and built to produce yarn that will vastly improve the efficiency of the knitting and weaving operations as well as the twisting operation. It turns out yarn of accurate twist, uniformity and cleanliness on perfectly formed packages, the right size and weight for the job.

•

Right

The compact, businesslike gear unit of the Model 110 Twister. Twist gearing can be adjusted from right to left in less than a minute. Spiral bevel gears are continuously lubricated by a built-in oil pump. Both ends of the Model 110 are totally enclosed, readily accessible.



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With ETCHISON Patented Steel Beam Heads

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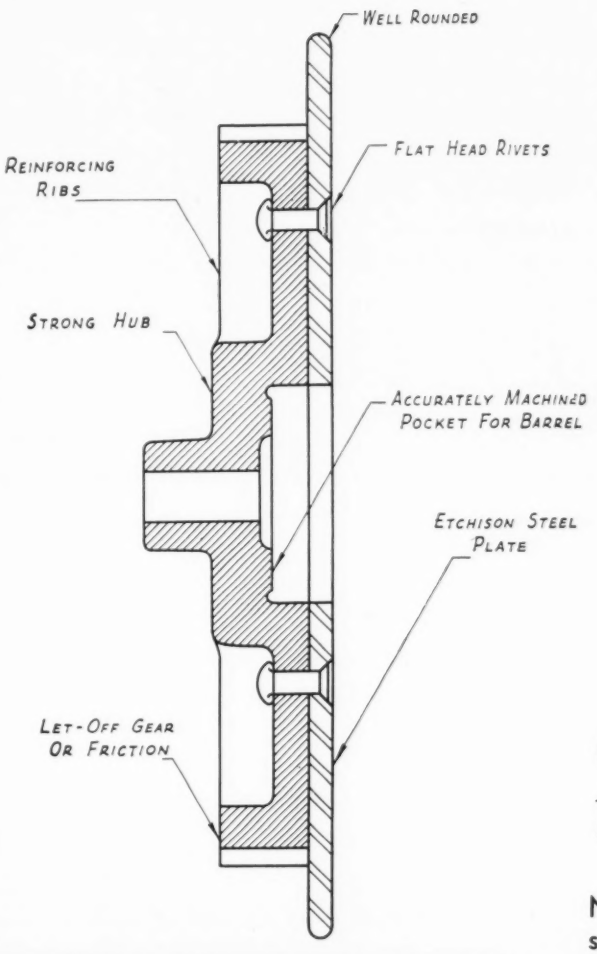

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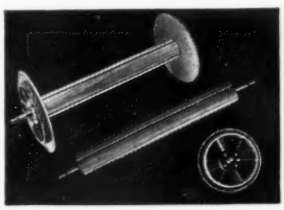
By Performance

CUT DOWN LOSSES
Due to Beam Head Breakage

Note the construction details of an Etchison type steel beam head. A steel plate provided with a cast iron gear or friction let-off replaces the usual cast iron head. The steel plate will not break under the most severe treatment. Both the steel plate and let-off are accurately machined before fastening together with rivets, and the finished head is straight and true. An Etchison steel beam head is practically indestructible. They cost more than a cast iron head, but are worth the difference. They save not only in breakage but also in losses from damaged warps, caused by broken heads. Etchison steel beam heads will help increase efficiency in your weave room.

Also manufacturers of special textile machinery, cloth room machinery and textile repair parts.

Other QUALITY Products



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GEARS . . . Gears of all types —noted for their efficiency and durability.

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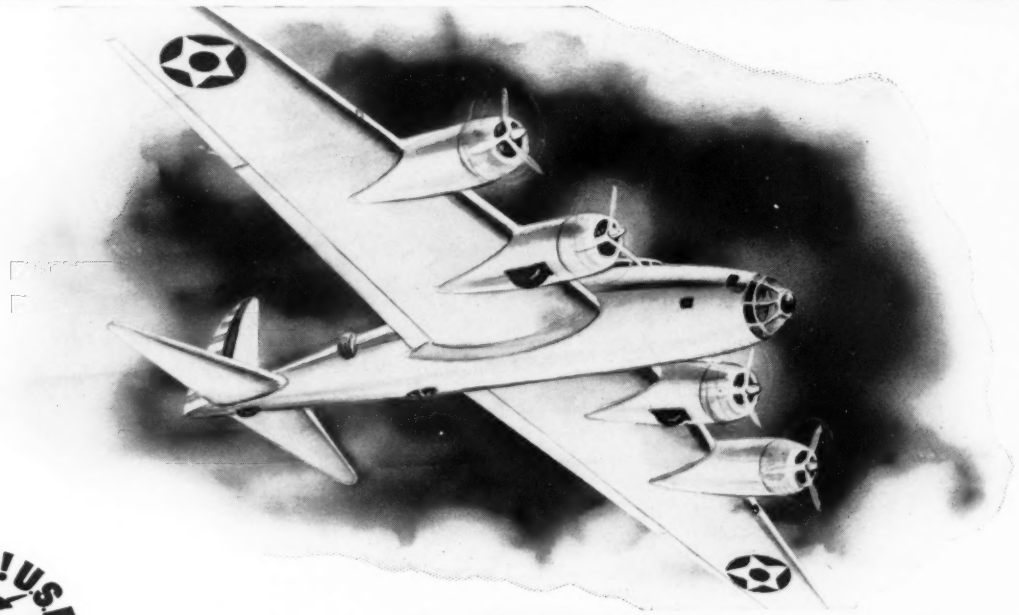
AMERICA BUILDS A BOMBER



LET'S GO! U.S.A. KEEP 'EM FLYING!

UNCLE SAM NEEDS PILOTS BE A U. S. ARMY FLYING CADET

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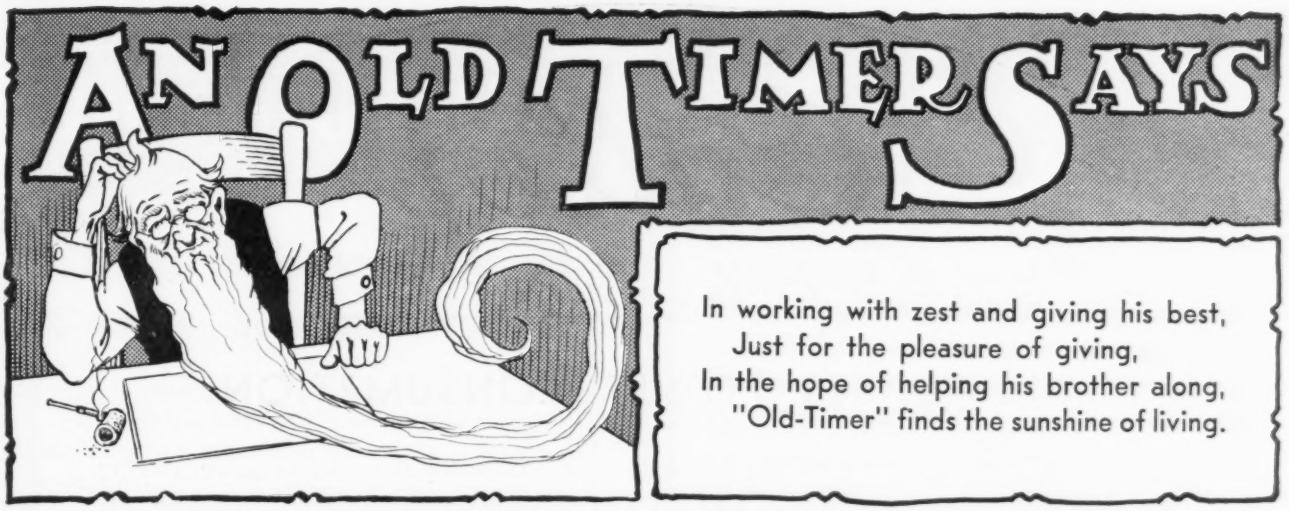
AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Opportunity is Knocking at Your Door!

WITH THE COMING of summer we naturally think of the vast number of young men who have received their diplomas and are starting out to make their fortunes. The young textile graduate does not realize how fortunate it is for him that the textile industry is calling for more graduates than the textile schools are turning out. The graduates in many other lines are not so fortunate.

In May of this year a friend of mine, a mill executive, asked me to locate a few textile graduates for him to place in his different mills. Of course May was a little late to start as I soon found out because in applying to three textile colleges I did not get a man. All of them had already been placed.

Now, what do you fellows who are reading this page get from this experience we have just had of not finding enough textile graduates to supply the demand? Here's one answer: Why in Heck don't the young men in the mill, especially those who have had a grammar school or a high school education, make a start toward getting a textile education? Most of the large mills have night classes, and then there are the correspondence schools.

It is the duty of all overseers and superintendents to talk to the young men in the mill and explain to them what wonderful opportunities await them if they will only take advantage of them. One of the best arrangements we know of is for a number of young men to take correspondence courses and employ someone who is capable of teaching them, and make a class which will meet say two nights per week, and all study their correspondence courses together. This suggestion may be considered unncessary by most readers, but OLD-TIMER is making it based on actual experience he has had with young men taking correspondence courses—so many of them take the courses and then fail to finish them. To form a class and have a capable instructor means that more of the boys will get their diplomas.

As above stated, we believe it is the duty of every overseer and superintendent to give such advice to the young men employed in his department or mill. You will get a lot of pleasure out of the fact that you have started some young fellow on the road to success, and at the same time you may develop some men whom you will promote right in your own mill. At any rate, be broadminded enough to recommend such young men to other mills as your judgment tells you are deserving of a chance at promotion whether you yourself have an opening or not.

There is another good point which you can bring out in regard to young men who have had to support themselves by working in the mill and have not had the money to attend textile school. If they will get the textile training by correspondence course or otherwise they will, in many mill men's opinion, have an advantage over the textile school graduate on account of their practical experience which is a part of the textile education the textile school graduate must get after he receives his diploma, and again, the boy who shows his "spunk" by getting his textile training by having to work for it oftentimes gains promotion faster.

OLD-TIMER is making this appeal to all overseers and superintendents who are readers of this page in behalf of the young men who are working for you, not only because it is a noble thing for you to do, but because there is a real shortage of such men, as is proven by our efforts and those of others to find several textile graduates. There are many smart and ambitious young men in the mills who will jump at this opportunity if it is explained to them by their overseers and superintendents.

Incidentally, there are many overseers who should do just what OLD-TIMER has suggested that these young men do—take a correspondence course in textiles and if necessary employ an instructor to help you finish the course and get your diploma.

"Oh, I'm too old"—not on your life! Make up your mind that you have got spunk enough to finish a textile course and, boy, you will be proud of it. And don't think your employer will not find it out. Your general conversation with him would tell him you are acquiring more knowledge. You will use better language in talking, and that means that you will have better judgment, and OLD-TIMER would not be at all surprised to hear of your promotion to a better job.

Cutler

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The United States Government has asked the textile industry to conserve power during the present national emergency. CUTLER TAPE is the ORIGINAL POWER-SAVING SPINNING TAPE. Inferior tapes with high-sounding names, produced in imitation of and subsequent to Cutler Tape, cannot equal in quality the patented Cutler product. In war emergency as in peace the best is none too good for our country's needs, and the best in spinning tape is CUTLER SAK.

ROGER W. CUTLER

BOSTON, MASS. GREENVILLE, S. C.

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Better posts are but one of the Page advantages. When you do business with a Page distributor you are dealing with a technically-trained, long-experienced local business man who owns his own plant and is permanently interested in every job he handles. He is a member of the largest fence engineering and erecting organization.

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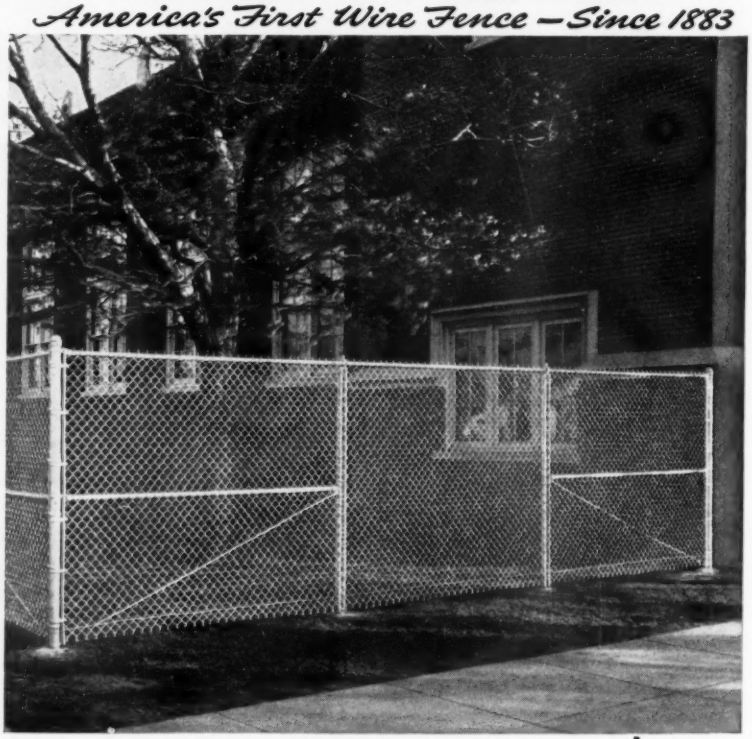


A PRODUCT OF PAGE STEEL & WIRE DIVISION — AMERICAN CHAIN & CABLE COMPANY, INC.

HOW OTHER MEN MANAGE

Wants Discussion of Weave Room Seconds

EDITOR COTTON:

I should like very much to see some discussion in your magazine relative to the causes of seconds in the weave room, and how they may be prevented. This is quite a big order, I know, but I do feel that some good will come of such discussion, even though it may be broad and general.

CONTRIBUTOR NO. 7249

WE INVITE readers of "Cotton" to submit inquiries relative to any type of mill problem, from machine settings to personnel problems. Where questions concern technical problems, please give in detail your present manufacturing specifications pertaining to the immediate problem as this will permit a more intelligent approach and answer to the question. Readers are invited to make use of this magazine for the discussion of any and all problems, and letters, questions or answers need not conform to any particular style as they will be properly edited before publishing. Where questions and answers are submitted, no identification of the source will be made, but will be published under a "contributor number".

Variation in Yarn and Low Break

THE following manufacturing specifications are given by "CONTRIBUTOR NO. 7196" on page 174 of the March issue of COTTON, who complains of having too much variation both in his roving and in his 41s filling yarn, combed stock, and too low a breaking strength. He asked for comments on his present manufacturing set-up.

"Cotton 1 1/16-inch Strict Middling; 12-ounce lap, 3-process of pickers, breaker picker 3-blade rigid beater giving 26 beats per inch, intermediate picker with 2-blade rigid beater giving 46 beats per inch, and finisher picker with 3-blade carding beater giving 32 beats per inch, making a total of 104 beats per inch. We allow one-half pound variation each side of standard in picker laps.

"Card drafts 110.8, making 45-grain sliver, with 100 per cent production being 6.3 pounds per hour. The sliver lap is 750 grains and drafts 1.44 and the ribbon lap is 750 grains drafting 6.00 (6-lap machine). There is a 50-grain comber sliver (8-lap machine) drafting 102, getting 230 pounds per 10-hour run.

"The drawing sliver is 50-grain with 6 ends up, 2-process, drafting 6.00. We have late model Super-draft slubber, 8x4-inch, making 4.10 hank roving, drafting 24.60, with twist multiple 1.23 times the square root. The 41s filling has a 3.20 twist multiple."

Thus far there have been several answers from mill men who offer opinions for "CONTRIBUTOR NO. 7196", and these are given as follows:

EDITOR COTTON:

In reply to the question of "CONTRIBUTOR NO. 7196" it seems to me that he has a nicely balanced department and one that is ideal for combed numbers.

Since he is having variation and low breaking strength, it would be well for him to check on the present method for using re-worked waste in the picker room. He is probably using a waste lap or a re-worked waste lap on the apron of his finisher picker, and if so, I would advise him to discontinue this practice as it is a hazard to an even lap.

The proper method is to mix all re-worked waste in the opener room along with the regular mix of opened bales of cotton. He should use a separate hopper for this if possible so that the flow of re-worked waste can be controlled. By using the hopper he can eliminate the waste lap on the apron of his finisher pickers.

He is using one-half pound variation each side of standard in his picker laps and I believe one-quarter pound should be used on a 12-oz. lap.

At the cards he should see that the strippers do not put the ends up too early after stripping or light sliver will get into production, causing heavy and light places in further processes. The feed roll bearings on the cards must be in good mechanical condition as any play at this point will also cause variation in the sliver.

I would suggest the following settings on cards in order to get a better breaking strength: For 12-oz. lap—cylinder to doffer .007, licker-in to cylinder .010, feed plate to licker-in .010; flats at back stand .010, 4th stand .009 (medium), middle stand .009 (medium), second stand .009 (close and clear with .007), first stand .009 (close and clear with .007). Knife to back plate .029, stripping or percentage plate to suit percentage of toppings (ordinarily set .029). Draft plate .029, screen at front 1/8-inch, middle .032 and back .022, mote knife as close as will stand, and pitched full forward.

For the long draft slubbers on 1 1/16-inch combed stock, would advise this man to lower his twist multiple from 1.23 to 1.15, which will give him a twist-per-inch of 2.32 plus, whereas he is now getting 2.49 turns per inch. The bulk of 4.10 hank roving does not need any more twist on combed stock.

In figuring the lay per inch, let 11 x square root equal the lay per inch, and he will get 22 layers per inch, which will give a somewhat slacker tension and at the same time make a good firm bobbin of roving that is free from tangling. Since this machine is doing the work of a slubber, intermediate and speeder, we must not forget and try to run it as we do a speeder or roving frame—consider it a slubber.

I believe that "CONTRIBUTOR NO. 7196" has been

running the tension on this Superdraft frame too tight and the twist running up the strand of roving has been stretching it while it is in a ribbon form, just as it leaves the bite of the front roll. This is my reason for using a close lay so that he can run the ends slack enough to get away from this trouble.

I think that if this man will check the foregoing points he will have less trouble in a few days. He should start with the long draft frame first, and if he finds his trouble there, he will not have to check back through his whole job.

CONTRIBUTOR No. 7200

◆

EDITOR COTTON:

The spinning plan of "CONTRIBUTOR No. 7196" has the looks of a healthy set-up—with one exception, in my opinion. I think the weight of the comber lap at 750 grains used with 8 doublings is entirely too heavy, resulting in the enormous draft of 102.

While this comber set-up may or may not be the cause of the excess variation in the yarn, I think of a far more dangerous condition which is responsible for great havoc in the spinning room—stretched roving.

A 4.00 hank roving can be "stretched" to a considerable extent before being found out because of breaking back in the creels. The fact is, there may be a few breaks and still the roving can be stretched, having thin and thick places which are responsible for weight variation in the yarn.

But, how can the roving be stretched, when the roving frames seem to be running excellently? True, they may run good, especially if they are helped along with a tooth or two of extra twist. If I were in the place of "CONTRIBUTOR No. 7196", I would proceed as follows:

Size about 50 to 100 three-yard tests of drawing sliver taken from the second process. Mark down the results and see if there is abnormal variation. Should such variation be encountered, it would be plain that some process ahead of the drawings may do the damage.

If the variation is normal on the drawing sliver, look for that *stretched roving*.

How to Check the Roving Frame

In checking the roving frame, first ascertain the approximate correct number of layers per inch (for 4.10 hank roving there should be between 19 and 20 lays per inch). This being checked, and eventually changed, put on a tension gear that gives a rather slack tension.

The reason for this is obvious, since we can easily see when the ends are flapping, and if they are flapping too much, we can always adjust them by changing a tooth or so to take up the slack.

Stay with the frame, checking the tension from time to time. This can be done by lifting an end slowly with a pencil for about three inches and then withdrawing the pencil. If the now slack end continues to be slack for a reasonable time, the tension is normal. If the dropped end catches up as soon as let go, there is too much tension.

Rather have an occasional slack end leave the flyer than have the ends run-in in violin string fashion. If the correct tension gear is arrived at, it may still be necessary to take off, or as the case may be, to put on another tooth on the lay gear to quasi synchronize lay and tension.

The diagnosis of the problem shows the foregoing roving troubles, variation, weak yarn and probably bad spinning.

I might say that the beating of the cotton at the pickers is more than high enough, especially for Strict Middling cotton. Why not leave out one picking process, say the intermediate?

I would suggest the following spinning set-up:

Cotton	Same as at present
1st Picker	Same as at present
2nd Picker	Eliminate it
3rd Picker	Same as at present
Card	Same as at present
Sliver Lap	600 to 650 grains per yard lap
Ribbon Lap	600 grains per yard lap
Comber	Same as at present
Drawings	Same as at present
Superdraft	Probably a little less twist (Multiple 1.15)

The foregoing is all based on the assumption that the roller settings are correct.

CONTRIBUTOR No. 7201

◆

EDITOR COTTON:

It would be very difficult to blame any one process for the variation and low break described by "CONTRIBUTOR No. 7196". It may be in the picker room, on the comber, or on the drawing frames. When one is dealing with the long draft roving, all conditions in the picking, carding, combing and drawings must be as nearly perfect as possible.

This man has the three process picking system, which I think is very good and should be in his favor, though there will be those that disagree with me.

If the picker laps are being regulated to one-half pound each side of the standard 12-ounce lap, he should get a very even card sliver, but the human element enters into this. I am not finding fault with the picker man, but I would surely check up on the lap weights quite often, weighing several laps three or four times each day until I was convinced that my picker laps were running as evenly as they should. Have some laps weighed yard-for-yard to see if the laps are uniform all the way through. I have caught picker men weighing a lap that was too heavy and they would break off a piece to make it the right weight.

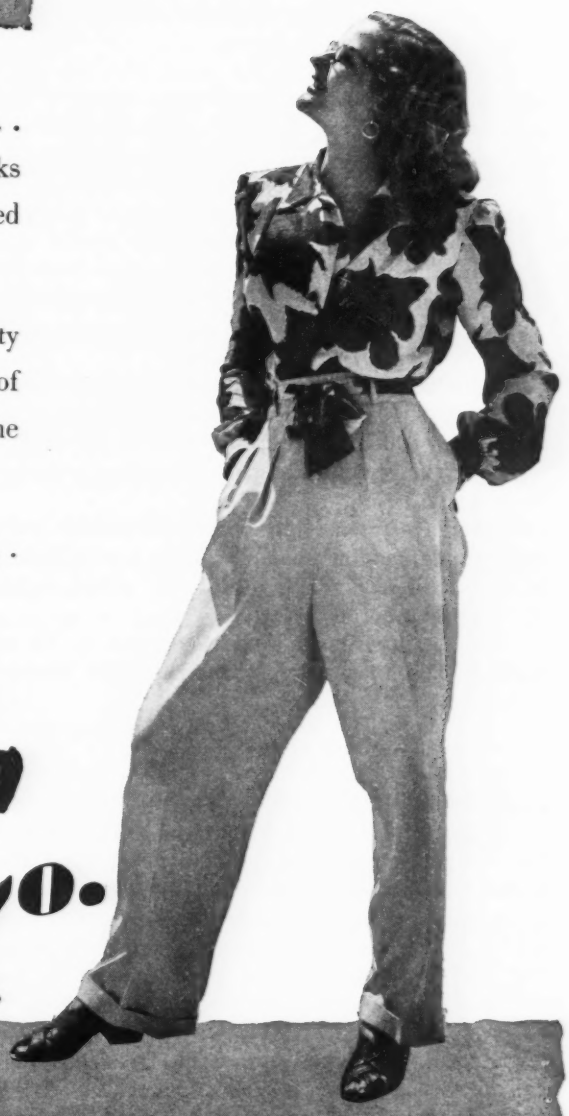
The cards might be checked to see if they are all taking out about the same amount of flat strips and the same amount of cylinder fly. If some are making a heavy flat strip and an excessive amount of cylinder fly or vice-versa, there will be heavy and light card sliver.

The ribbon machines should be sized at least once in eight hours and any that are too light or too heavy should be changed.

The comber waste percentage should be kept as near the standard as possible to avoid an unevenness of comber sliver.

I would see that all drawing rolls on the sliver lap machines, ribbon machines, comber draw box rolls and drawing frame rolls are in good condition, also that they are not allowed to get dry but kept well oiled. Any dry or bad uneven rolls in any of these machines will have a tendency to make thick and thin places in

*PARAPON
*PARAMINE
Rhapsody in Fabric



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the sliver on that particular process, which will follow right through into the finished roving.

The trumpets on the breaker and finisher drawing frames should be of the proper size for the weight sliver being run: that is they should not be so small that they cause a lot of friction on the sliver as it passes through, therefore stretching it, and not so large that they will allow large bunches of clearer waste to pass through.

The rolls on the slubber should be in good condition. See that they are not grooved and that they are well oiled.

All rolls from the sliver lap machine through to the slubber should be properly set for the staple being run to help the evenness, because any uneven sliver that gets to the slubber is going to make an uneven roving as there is no doubling there to help to even it up.

Too much importance cannot be placed on the sizing at any process and I am not in favor of the same person sizing that has to change gears, as a good many times they will cheat a little to avoid making a change, and this is a sure way to get uneven roving, both light and heavy.

Going back to the picker room, if there are a few laps that are one pound or a little more away from the standard, when these laps are run through to the 4.10-hank roving these laps have been drafted out to about 86,475,141 times their original length so it can be seen that there would be considerable light or heavy roving.

In the spinning, this contributor should check on the diameter of his leather rolls and see that they are uniform, for a variation of a 32nd of an inch can make numbers vary two or three numbers; and a 16th of an inch may vary four numbers.

Rolls not oiled right will cause count variation.

We spin 40s/1 and for rings that are two years old we use 6/0 to 8/0 traveler with a 5/8-inch circle—regular square point; also mixed rings will certainly cause trouble.

Other conditions that will cause uneven yarn are: slack bands, spindles out of plumb, dry spindles, worn bolsters and shaky spindles. Also check weights on front and back rolls.

The draft seems a little long and would suggest making 5.00-hank. Naturally this will increase his cost.

CONTRIBUTOR No. 7204

◆

EDITOR COTTON:

In reply to "CONTRIBUTOR No. 7196", who is having trouble with uneven yarn and low breaking strength, I would like to offer the following opinions:

I believe that the trouble is in his picker room, and also that he has tight and slack tensions on his roving and drawing frames. It appears to me that combers and spinning frames are hooked up as well as he might get them.

Starting in the picker room, if he has the vertical opener, it should be run at about 550 rpm, and if there is ample picking he should make a 11 ounce lap instead of the 12-ounce lap, continuing to make a 45-grain sliver at the cards. I think that 46 beats per inch are too much for a 2-blade beater, he is hitting the stock too hard with his 2-blade beater. It would be better on the stock to hit the 46 beats per inch with a 3-blade beater because this will not strike the stock so hard, and it will be more regular and evener. I would also use the carding beaters in the intermediate and finisher pickers and the 3-blade beater in the breaker picker. I suggest the following beats per inch, breaker picker 26, intermediate picker 35 beats and finisher picker 35 beats per inch. The following speeds and settings are suggested:

3-blade breaker beater, 1050 rpm, with feed roll to beater set 3/16-inch. Top grid bar to beater 3/4-inch, and bottom grid bars 1/2-inch.

Intermediate picker beater 1000 rpm, fan 1100 rpm, feed roll to beater 1/8-inch: top grid bars to beater 1/2-inch, bottom grid bar to beater 3/8-inch.

Finisher picker beater 1000 rpm, fan 1100 rpm, feed roll to beater 1/8-inch, top grid bars to beater 3/8-inch, bottom grid bars to beater 1/4-inch.

At the cards I would run the 45-grain sliver and run the cylinder at 165 rpm, with the licker-in running 425 rpm, setting the licker-in to .007, cylinder and doffer .007, and all top flats to .009. This can be done on light carding if the cards are in fair shape. Set feed plate to licker-in to .010, and set stripper plates and screens for the amount of cleaning and strips desired at the cards.

No doubt his drawing tensions are very uneven, caused by not oiling as often as he should and not cleaning enough. I clean my top rolls every 8 hours and take the bottom rolls out and clean them once a week.

CONTRIBUTOR No. 7208

Double-Carded Work

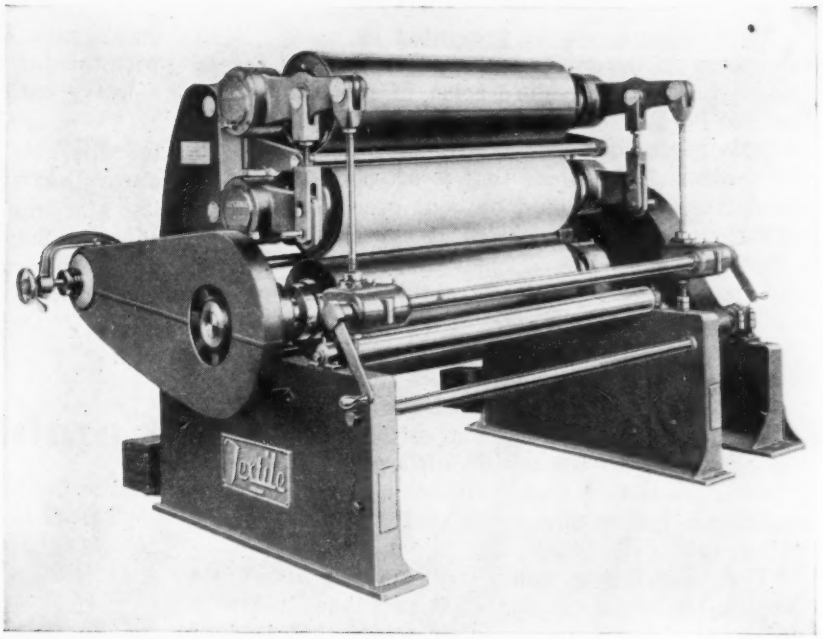
EDITOR COTTON:

This is in answer to the question of "CONTRIBUTOR No. 7232", which appeared on page 104 of the July issue of COTTON, and who wishes to know how he may secure the results of double-carded work, without actually doing the double-carding. His chief trouble is the amount of neps he gets.

I have studied over his speeds and specifications as given and these seem to be in line with about what should be used on the class of work that he is doing. However, he might try setting his mote knives (now set at .007) so as to get a little of the rough parts out of the cotton, such as immature cotton, and crushed seed, rather than trying to get out nothing but mote and leaves. This may be what he is doing now.

If I were trying to overcome the defects of neps that this man has, I would first check the grade of cotton and see if the neps are being put in at the gin. This happened to me at one time.

At one plant where I formerly was located we had all of the cotton that was to be dyed run through a cleaning process such as opener, vertical cleaners and cleaning trunks, and then we watched the dyeing process and saw that it was properly dyed and dried, and by drying I do not mean baked. If we left the stock wet the picking would cause it to curl or nep.



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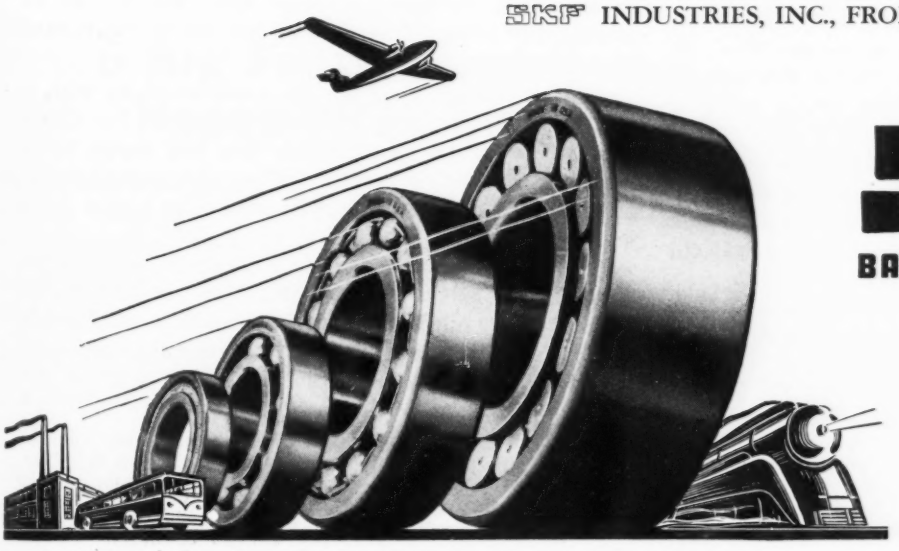

SKF

BALL & ROLLER BEARINGS

This nepping can be prevented by using oil on the cotton in the preliminary processes, the use of the oil tending to restore some of the natural fat that has been taken from the stock in the dyehouse.

It is perfectly possible to manufacture neps on the cards and one place that is often overlooked is the doffer. Wires could be bent over, and we call such things "shiners". Here at our plant we have a tool that looks like a small carpenter's plane except that the blade comes straight and is used like a plane that really lifts these wires up.

Your contributor should really trace his trouble to the source of the nep and then work on that, for otherwise he will have to continue double-carding.

Many times neps come from cotton that is ginned wet or green and we can do little about it after it occurs. We have a man that does nothing but class our cotton for us and we think that this is money well spent.

This contributor could try running one bale through the pickers, cleaning it and then dyeing it, and make a test with the other cotton that is dyed without being cleaned and he can tell just where these neps are being made.

CONTRIBUTOR No. 7240

◆

EDITOR COTTON:

I am answering the question asked by your "CONTRIBUTOR No. 7232", who wishes to get the same results as double carded work, without the expense of double carding.

I know of no way that he can get the same results as double carding, without actually doing the work just as he is now, but I might make a few comments that will be of some assistance to him.

His card settings and speeds are about right, but he could pull down on his card flats a little bit closer (now set .010) unless there is vibration on the floor. Also, my suggestion would be that he card much lighter on the contrasting colors where he is using a small percentage in a mix. For example, he might cut the card production to five pounds per hour on the white work that goes into a 5 per cent oxford, where the other 95 per cent is black.

I am not sure if this contributor means that both the black and white are pre-carded and then taken back to the picker room and mixed on the floor, or not. If this is the case then a Derby doubler or lapper could be used which might prove quite a saving.

It would also be helpful to me to know the preparatory cleaning equipment that this man is using. I cannot help but feel that the better the stock is cleaned and opened in the preparatory operation, then the better the work that his cards will do.

However, as stated before, I do not believe that this man will be able to get the results of double carding without actually double carding.

CONTRIBUTOR No. 7233

◆

EDITOR COTTON:

In answer to your "CONTRIBUTOR No. 7232", I might say that we have never had experience with double carding, but off-hand I would say that this man's card sliver is heavy. Ten pounds per hour with the doffer making 9 r.p.m., looks like he is using a heavy card sliver.

There is one other suggestion in my mind regarding this. He is using raw stock-dyed cotton and this always has a bad effect on cotton, whch may be giving him trouble. He can answer this question because he may be getting neps from cotton which has not been dyed, as well as from cotton which has been dyed.

CONTRIBUTOR No. 7239

◆◆

Combination Wind

EDITOR COTTON:

This is in reply to the letter of your "CONTRIBUTOR No. 7229" which appeared on page 124 of the June 1941 issue of COTTON, and who gave his experience on various spinning winds. He has asked for the experience of someone that is running combination wind. and I will pass along to him some of our findings.

We are running a 31s warp with a 4.25 twist multiple, 1¾-inch ring, 9,900 r.p.m. spindle speed on an 8-inch bobbin.

We were on warp wind, and realizing the advantages of using the combination wind, we decided to give the combination wind a thorough trial. First we tried different lengths of stroke and finally settled on 5⅛ inches as the most efficient stroke for us to run. This stroke completely filled our bobbin and gave us a doff of 3,900 yards in 6 hours, which was identical with the regular warp wind schedule.

After getting the stroke right, we ran an end-breakage test extending almost 10,000-spindle hours and found that the combination wind reduced spinning end-breakage by 33 per cent.

Checking this yarn at the spoolers' tailings, or kick-outs, they were found to be 13.4 per cent on warp wind and 13.6 per cent on combination wind.

We are now on combination wind and find it okeh under average conditions and weights, but when our yarn numbers run on the heavy side we experience trouble with roping-off. Since this trouble can be corrected or almost entirely avoided, we do not regard it as a serious drawback.

At the present time we are experimenting with a cam that gives a slightly faster traverse at the upper part of the stroke. So far this cam has shown some extremely promising results and we eventually hope to produce a package which will run even better than warp wind at the spoolers.

The greatest single trouble with combination wind is roping-off at the spoolers and to minimize this, all lifter rods are oiled every 200 hours with a good grade of lard oil. All warp doffers and spinners are cautioned to handle warp bobbins in such a way as not

Readers interested in further experience on various types of winds for spinning are referred to "Warp Wind vs. Filling Wind" on page 59 of the January 1941 issue, and to a report of the meeting of the Textile Operating Executives of Georgia appearing on page 79 of the April 1941 issue. Further discussion on this subject is invited.

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to disrupt the coils of yarn. All hands will willingly co-operate in avoiding bad work and no doffer will "pour up" a box of yarn he knows will cause trouble in the spooler room.

CONTRIBUTOR NO. 7247

Slasher Marks

Gives methods for preventing marks caused by third cylinder on slashers running indigo-dyed warps . . . . . .

EDITOR COTTON:

In the June 1941 issue of COTTON, page 86, there appeared a report of the slashing-weaving discussion by the men in some of the mills of Alabama. One question in particular was discussed at length, the causes of cylinder marks made by the third cylinder on slashers when processing indigo-dyed warps for denim work. I should like to add my comments as to how these might be prevented.

1. Check up on the crawl speed of the slasher. Juggling the gear ratio to make this speed a little different might help.

2. How about cylinder pressure and temperature? Nine pounds saturated steam seems to be ample for this job in most cases.

3. Doff faster. Doffing speed can be helped by ganging up on the job. The man having trouble should investigate a special beam clamp assembly that can be secured from one company. Name on request.

4. If the man wishes to go to a lot of trouble on the job, and has separate cylinder temperature controls on his slashers. he can rig up a lock-out valve on the third cylinder whereby the steam will be shut off this cylinder momentarily when doffing.

CONTRIBUTOR NO. 7248

Between Smokes

(Overheard)

THAT BENT STEEL on the speeder, be the bend ever so little and the wobble ever so slight, has possibilities for harm undreamed of by anyone who has never made a test of it. And the test is quite simple and easily done. When the frame doffs, get a bobbin of roving from the spindle nearest the bend. Save it until the next doff and get another one. Put these two together in the spinning creel, and watch the spinner try to keep this end up. It will break down every few minutes. One test of this sort is usually enough to convince any man of the folly of allowing a bent steel roll to run.

YOU MAY FORBID your frame hands to take up or let off the tension on their frames, but it will be just so much breath wasted unless you have a speeder fixer who will change the tension gears when they need it. And they will need changing with every marked change of the weather.

If your fixer is worth his salt, he will always know just what tension gear is on each and everyone of his frames at all times. He will not have his spare gears scattered about under the frames, but will have them in the cupboard or closet, neatly separated, so that changing any or all frames can be done in a few minutes. And if this fixer's overseer is worth *his* salt, there will be enough gears there so that a one-tooth change, either way, can be made at any time.

With all these conditions met, an order against taking up or letting off has some chance of being enforced.

A BROKE-BACK end on a speeder frame is an eyesore, and all good frame hands know it. They try to prevent it, when a bobbin has become too small, by giving the roving something less than the standard three wraps on the presser finger. Their good intentions should be commended. Speeder hands are usually a high type of worker. Still, there is need of a little intelligent guidance here in the matter of trying to save a broke-back end.

They should be taught that there are times when it is better to break the end back than to try to save it. If the bobbin is less than half-full, two wraps is hardly likely to make a good full bobbin, and with only one wrap it is certain that what will be made is a big, soft and easily tangled bobbin, absolutely unspinnable and fit only to be cut off with a sharp knife. Broke-back ends, bad as they are, are not as bad as so much white waste.

ON SPINNING or speeders, a certain number of ends will come down, no matter how ideal the conditions of operation. The aim here is not to abolish the "ends down" evil, but to keep it within its lowest possible limits.

But the same is not true of the card. A card end should *never* come down of itself. The card hand lapping-up may choke the end down, a puff of wind from an open door or window may blow it down, but if the card is in the condition it should be, the end will never *come* down. If it comes down, something is wrong, something that can be fixed.

IF YOU are having your feed plates on the cards set to a number seven gauge, and are wondering—as you probably are—why your yarn doesn't break stronger, try pushing off the feed plates. You will find, if you give it a thorough and impartial test, that the yarn grows progressively stronger as you push off the feed plates until you reach twenty-nine gauge.

There will be no difference in the appearance of the web until after you pass twenty-two. From there on a slight, a very slight cloudiness will be observed. So compromise on twenty-two gauge as the happy medium for a pretty carding web and strong yarn.

LITTLE OR NOTHING is to be gained by experimenting with speeds of card cylinders. Around 170 r.p.m. is standard speed, and it became standard because this

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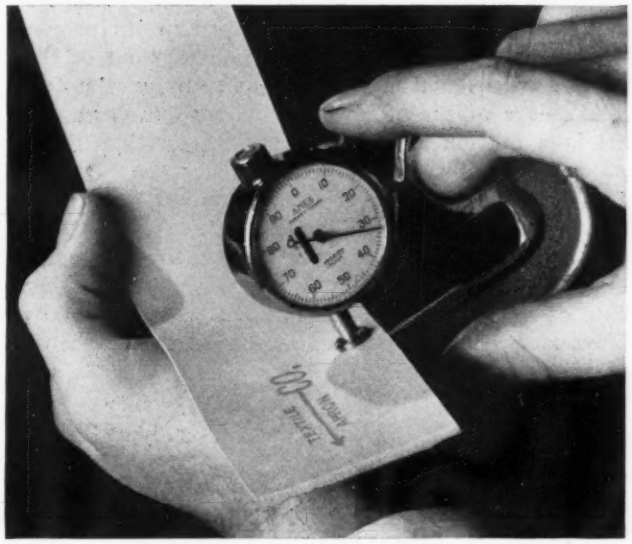

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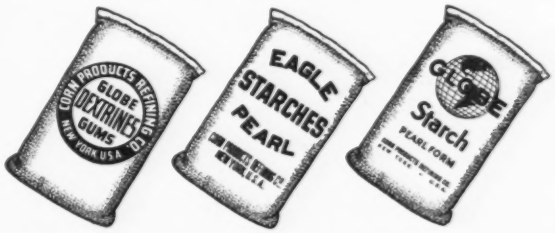

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gives about the right surface speed, which in turn creates the proper air current necessary for the carding operation. A higher speed means troublesome air currents to the detriment of the carding.

The same thing may be said of the licker-in, and for the same reason. So run cylinders and lickers-in at the speeds recommended by the builders.

THERE ARE FEW MEN nowadays who question the efficiency of the one-process system of picking. There are some who still claim that the old system made the laps a "leetle mite" cleaner, but none deny that one-process produces more even laps. And the saving in cost is great. This in itself is enough to make the investment worth while.

The man who tends the one-process picker has so much machinery to run that he must be given more time than on the old system for the cleaning out of machines at the end of each shift. This is never less than half an hour, and in some mills is a full hour. Here is when and where the fixer responsible for the upkeep of the pickers should be on his job. It is his opportunity for a complete check-over of the machine, the fixing of little things before they become big things, the stitch in time that saves nine —the nine in this case being the bad breakdown during running time.

A breakdown on one-process pickers is in one sense like a sore throat on a giraffe. In the one case, there is so much of it to hurt. In the other, there is so much machinery stopped.

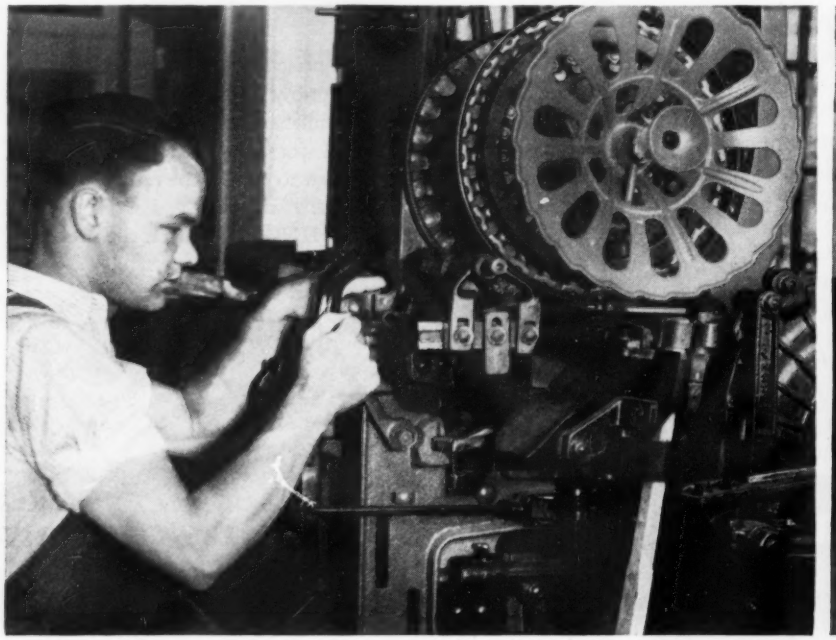
IN THE COTTON MILLS we have always known about bottlenecks, and have used the word in its proper sense to describe a weak point in the lay-out of the mill. A process without sufficient equipment to fully take care of the stock in its journey through the mill is a bottleneck, but it would seem that these newspaper writers lately are working the word to death. Every sort of difficulty in our defense program is being called a "bottleneck".

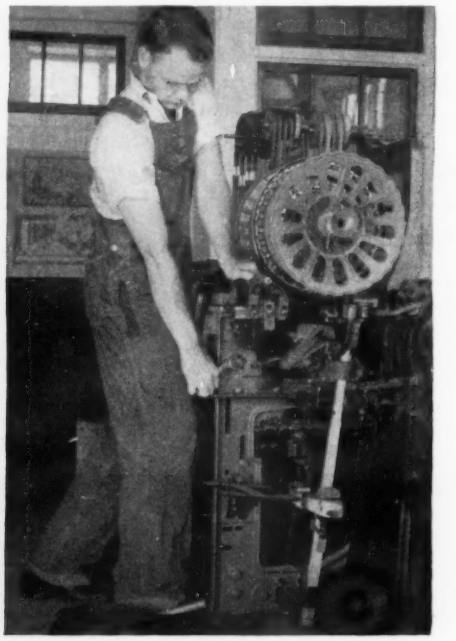
A mill, properly designed by a competent engineer for a certain class of goods, and kept on that class of goods, will have no bottlenecks. Badly planned additions and changes in the kind of product made cause them. And they are a pain, as any overseer can testify.

ROSE

Safety Methods in the Mill (Loomfixing)

MINOR CUTS and bruises are the bane of a loom fixer's existence, and a skinned knuckle may remain raw for weeks, or infection may set in and cause lost time. These posed pictures show what one man considers the right and wrong way to tighten the nut that is directly below the battery mechanism. He considers the method at left all wrong, because if the wrench slips his hand is thrust up into the several sharp projections under the battery and he may be injured. He is not well braced with his left hand so his whole upper body and face may land against the loom if he isn't careful. At right, he shows a much more careful method of tightening the nut. He stands, braces himself with his feet and left hand, rests his forearm against his leg and pulls upward, shifting his wrench as the nut turns so that he can assume the same position. If his hand or wrench slips his arm braced against his leg will prevent his injuring himself. Readers may have their own ideas of safety in the mill, and the editors will welcome photographs along this line. If you can improve on the method suggested here, let the editors have your ideas.





Posed COTTON photos made in textile school of Alabama Polytechnic Institute

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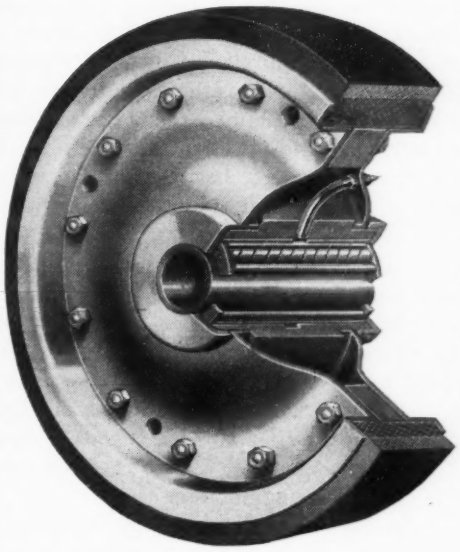

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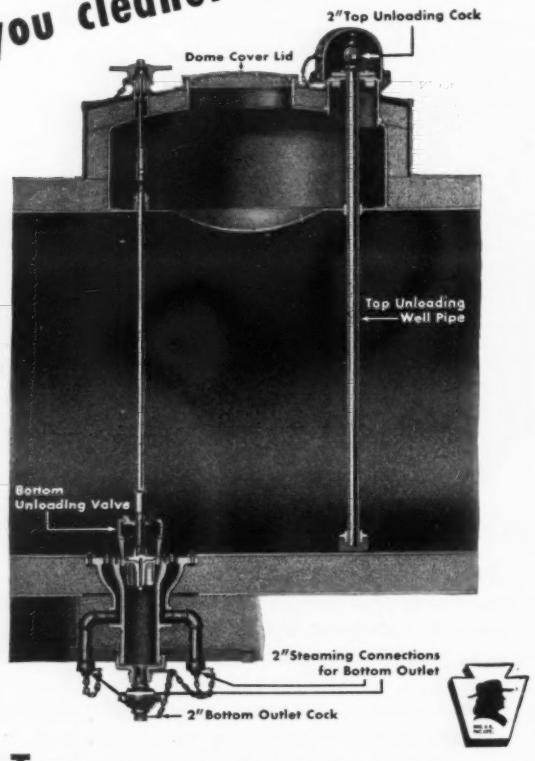
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Smaller Roving Bobbin

EDITOR COTTON:

This is in answer to your "CONTRIBUTOR No. 7210", whose question appeared on page 109 of the April 1941 issue. Briefly, this man is making 2.15 hank roving for slub filling, using a .50 h.r. in the creel double (on H. & B. 8x4-inch machine) and the back line of spindles has bobbins of roving ¼-inch smaller than the front line of spindles. When changing to 5.00 h. r. the difference in size of package disappears.

It might be well for this contributor to change the top cones. I had the same experience as this man did once and tried changing gear combinations, taper, lay gears, etc., trying to get better running work, but could have done much better if the top cones had been changed.

Also, his lay or laps per inch of roving on the bobbins may be wrong. A good basis to work by is to have 9.3 times the square root of the roving for laps per inch. He may have his lay too open for best running 2.15 hank roving (with the 2½ per cent stretch on one row of bobbins). I might say that my experience has shown that the back row of spindles produces the heaviest roving, due to the extra stretch being on the front row of bobbins.

This man could be creeling wrong. Perhaps he is creeling his front and back top lines together in the same trumpets where entering the back rolls, and the middle and bottom lines into the next trumpet adjacent. If the roving is drawn to the trumpet from a long distance there bound to be more stretch. I suggest that "CONTRIBUTOR No. 7210" creel one end from the front line and one from the bottom line together into one trumpet, and one end from the top back line and one from the middle line into the next trumpet, and so through the whole frame as this will equalize the stretch and thereby give more even roving.

Creeling every other bobbin from 12x6-inch slubbers into 8x4 creels is well understood too, yet this alternating creeling method will work here too, and not have all the empty bobbins running into the front and full ones into the back spindles.

Another suggestion to correct some of the stretch that exists between the two lines of bobbin gears: He could have made a bastard pitch gear of 38 teeth of the same diameter as his present 37-tooth gears, putting this 38-tooth gear on the front bobbin shaft, thus reducing this stretch to a minimum. If, after he checks his back bobbins and finds these to be the light ones, he could have a 36-tooth gear made and place this on the back bobbin shaft to mesh with his horsehead gears. This small amount of difference in pitch of either of these two gears will not be great enough to prevent them from running satisfactorily.

Another change that could be made would be to have the bosses of the flyers for the back line of spindles increased by about 2½ inches as this will equalize the angular running pitch of the front and back strands of roving. This will involve a definite separation of the flyers running on the front and back lines of spindles, but no other changes will be required.

CONTRIBUTOR No. 7242

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4. HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

PLANT AND PLANT MAINTENANCE . . .

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104. FENCE FACTS—A new booklet illustrating and describing chain link fence in a variety of styles and four different metals for every type of fencing installation. Also wrought iron fence in various beautiful styles. A concise handling of information for those wanting facts about fence.—PAGE FENCE ASSOCIATION, Bridgeport, Conn.

105. DULUX — THE WHITE FINISH THAT STAYS WHITE—New book describing the new ten-point finish for factory walls and ceilings, the finish that stays white, stays cleaner and stands repeated washing.—E. I. DU PONT DE NEMOURS & CO., Finishes Division, Wilmington, Del.

106. THEY STAY BRIGHTER LONGER—This interesting illustrated booklet containing facts about Mazda lamps will be sent you free on request.—GENERAL ELECTRIC COMPANY, Dept. 166, Nela Park, Cleveland, Ohio.

107. FINNELL SCRUBBERS — Illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

108. RIHCO TYPE B HUMIDIFIER HEADS—Bulletin describes new atomizers with construction lessening air consumption. — ALDRICH MACHINE WORKS, Greenwood, S. C.

111. SUPPLY, MAINTENANCE AND REGULATION OF HUMIDITY—General catalog of humidifying and air-conditioning devices including humidifiers, controls, atomizers, sprayers, etc.; also, lap weight indicators for picker room.—AMERICAN MOISTENING CO., Providence, R. I.

112. ROBBINS FLOORING—Outstanding installations of flooring including hard maple for industrials with textile and general photographs. — ROBBINS FLOORING CO., Rhinelander, Wis.

113. BAHNSON HUMIDIFIER—Bulletins 307 and 309 on self-contained humidifier units, stressing horizontal circulation, operating costs and control flexibility.—THE BAHNSON CO., Winston-Salem, North Carolina.

114. Hard Maple Flooring—Featuring close-up of Northern Hard Maple Flooring and specimen pieces to show grades, prepared for architects, builders and others when considering flooring grade requirements. —MAPLE FLOORING MFRS. ASSN., Chicago, Ill.

115. ATOMIZER HUMIDIFIERS—Recent issue of "Parks' Parables" on atomizer method of humidification. Bulletin 1140. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

116. FLUORESCENT LIGHTING—New booklet on Certified Fleur-O-Liers lighting fixtures for high-level fluorescent lighting. — FLEUR-O-LIERS, 2137-A Keith Bldg., Cleveland, Ohio.

117. HANDBOOK OF MAGNESIUM ALLOYS—45 page booklet on constitution, properties, magnesium and alloys including working and machining. Data sheets also available to fabricators.—AMERICAN MAGNESIUM CORP., Cleveland, Ohio.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

202. TEXTILE MOTORS—Bulletin on ball-bearing motors for loom drives and all textile applications.—FAIRBANKS-MORSE CO., Chicago, Ill.

203. LUBRICATION OF TEXTILE MACHINERY—32 pages illustrated. Data covering the economical lubrication of all textile machines.—NEW YORK & NEW JERSEY LUBRICANT CO., New York, N. Y.

207. DAYTON COG BELT CATALOG—A 32 page booklet on power drives, arranged so that anyone can select the proper standard drive for any condition. It also provides data for the calculation of drives where acquired.—THE DAYTON RUBBER MFG. CO., Dept. C-11, Dayton, Ohio.

208. 3-IN-ONE OIL FOR INDUSTRIAL USES—Showing the many industrial uses and advantages of this oil.—A. S. BOYLE CO., Jersey City, N. J.

210. GOODYEAR MECHANICAL RUBBER GOODS CATALOG—40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill.—GOODYEAR TIRE & RUBBER CO., Akron, Ohio.

213. LUBRICATION—This attractive booklet contains valuable and interesting articles on loom lubrication and also on spinning design and the function of spindle oils.—THE TEXAS COMPANY, New York, N. Y.

214. NORMA-HOFFMANN BEARINGS CATALOG—NORMA-HOFFMANN BEARINGS CORP., Stamford, Conn.

216. LEATHER BOOKLET NO. 202 — Attractive booklet illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Check Straps, Pickers, Harness Straps, Lug Straps, Bumper Straps, Solid Round Leather Belting, Flat Belting.—CHAS. BOND CO., Philadelphia, Pa.

217. TEXTILE LEATHERS—Catalog of complete line of leather products for looms, condensers, gill boxes, combs. Including G & K "Hairitan."—GRATON & KNIGHT, Worcester, Mass.

218. BALL BEARINGS ON TEXTILE MACHINERY—Catalog 9 gives advantages of ball bearings, describes types, illustrates each type of textile machinery.—THE FAFNIR BEARING CO., New Britain, Connecticut.

221. FAFNIR MECHANI-SEAL TRANSMISSION UNITS—Folder L describes transmission units (pillow blocks, flange cartridges, cylindrical cartridges) incorporating efficient type of seal.—THE FAFNIR BEARING CO., New Britain, Conn.

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224. LEATHER BELT DRIVES — Clear, concise non-technical descriptions of short-center pivoted motor leather belt drives with easily used drive selection tables, other pertinent data. — SOUTHERN BELTING CO., Atlanta, Ga.

225. BRONZE BEARINGS—64 page catalog of standard sizes of textile and industrial bearings, graphited oil-less bearings, bronze bars, babbitt metals.—THE BUNTING BRASS AND BRONZE CO., Toledo, O.

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227. MULTIPLE GROOVE V-BELT DRIVE DATA BOOK—Complete book showing many drive combinations for easy selection with engineering information for figuring special V-Belt drives. No. 915.—ROCKWOOD MFG. CO., Indianapolis, Ind.

228. MOTOR SWITCHES AND STARTERS—Bulletins covering Combination magnetic switch, mercury-button limit switch, magnetic motor starter, limit switch with snap-action.—GENERAL ELECTRIC CO., Schenectady, N. Y.

229. LUBRIPLATE FILM—Data on lubrication with Lubriplate applications, both grease and fluid types. Bulletin 12-40.—FISKE BROS. REFINING CO., Newark, N. J.

230. PRINCIPLES OF TEXTILE MILL LUBRICATION—Booklet giving specific lubricating problems and data on practical textile operation, including advice on uses of various oils and greases.—TIDE WATER ASSOCIATED OIL CO., New York, New York.

231. V-BELT ENGINEERING DATA BOOK—Over 50 pages of pertinent engineering information including data on selecting a V-belt drive design of special V-belt drives, numerous standard tables, charts and belt and sheaves list prices. — MANHATTAN RUBBER MANUFACTURING DIV. of Raybestos-Manhattan, Inc., Passaic, N. J.

232. SKF INDUSTRIES SPHERICAL ROLLER BEARINGS—36 page catalog on bearing applications and selection, also time saving computations.—SKF INDUSTRIES, INC., Philadelphia, Pa.

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235. JOHNSON LEDALOYL BEARING BRONZE—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pennsylvania.

236. LEATHER BELTING CALCULATOR—Handy and attractive calculator for determining belt speeds, horsepower per inch of belt widths, etc., will be sent free on request.—J. E. RHOADS & SONS, Philadelphia, Pa.

237. FAFNIR BALL BEARINGS FOR THE TEXTILE INDUSTRY—Outlining the applications and advantages of ball bearings on textile machinery.—FAFNIR BEARING CO., New Britain, Conn.

238. DESIGN OF V-BELT DRIVES—48 page booklet full of valuable tables and data showing the type, number and design of V-belts that will give the greatest efficiency on each particular drive.—THE GATES RUBBER COMPANY, Denver, Colorado.

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302 LUNKENHEIMER CATALOG 78—136 page catalog describing a complete line of Bronze, Iron and Steel Valves, Boiler Mountings, Lubricating Devices, Air Devices and other specialties. Also included is a section on the thermo-dynamic properties of steam, and a table of shipping weights.—THE LUNKENHEIMER CO., Cincinnati, Ohio.

304. MORTON NICKEL IRON QUICK OPENING HANDLE GATE VALVE—Illustrated leaflet describing the new Morton Valve for dyeing machines, pipe lines, steam and water lines, boiler blower valves and throttle valves. Manufactured in nickel, stainless steel and stainless steel trim.—MORTON MACHINE WORKS, Columbus, Georgia.

306. TEMPERATURE CONTROLLERS — 48-page illustrated Bulletin 225, describing instruments and accessories essential for efficient dyeing, finishing, slashing, mercerizing, kier boiling, and other processes involving temperature.—THE FOXBORO COMPANY, Foxboro, Mass.

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308. THE BROWN MOIST-O-GRAPH — 16 page booklet describing the Brown Moist-O-Graph which measures, records and controls the moisture content of cotton warp yarns.—THE BROWN INSTRUMENT COMPANY, Philadelphia, Pa.

CARDING, SPINNING, WINDING, ETC. . . .

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410. FIBRE CONDITIONING WITH TEXSPRAY COMPOUND—30 page booklet on treating of cotton or cut staple fibers with Texspray Compound including the advantages and development of fiber conditioning.—THE TEXAS CO., New York City.

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416. BRIEF SAGA OF THE RING TRAVELER—Interesting history of development of ring spinning in connection with cotton manufacturing. — NATIONAL RING TRAVELER CO., Providence, R. I.

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417. **PRECISION WINDING FOR SILK AND RAYON YARNS**—Describes the new No. 50 Leesona Winder and all attachments that are used for silk hosiery threads and rayon yarns. — UNIVERSAL WINDING CO., Providence, R. I.

418. **FIDELITY SPOOLING MACHINES** — Illustrated booklet describing the Fidelity Spooling Machine and outlining its many applications in the textile industry. — FIDELITY MACHINE COMPANY, Philadelphia, Pa.

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509. **ARCY**—Telling in an interesting way the story of Arcy, which completely liquefies ordinary thick boiling pearl starch and its many advantages. —DRAKE CORPORATION, Norfolk, Va.

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511. **HOUGHTO SIZE SR** — Leaflet describing a new sizing compound for spun rayon warps which provides high breaking strength, greater elasticity and increased weave-room production at low cost.—E. F. HOUGHTON & CO., Philadelphia, Pa.

512. **CARO-GANT** — The Original 100% Active Warp Dressing. Attractive folder describing Caro-Gant, the Warp Dressing that makes stronger, more elastic warps with a maximum breaking strength and a minimum reduction in elasticity.—HART PRODUCTS CORP., New York City.

DYEING, FINISHING, CLOTH ROOM . . .

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603. **THE MORTON SYSTEM**—Illustrated literature describing the Morton Improved double circulating raw stock dyeing and bleaching machine, the Morton horizontal revolving beam and package dyeing machine and beam bleaching machine, the Morton vertical package and roving dyeing machine.—MORTON MACHINE WORKS, Columbus, Ga.

604. **THE NEW PROCTOR AUTOMATIC YARN DRYER**—6 page illustrated folder describing the new Proctor automatic yarn dryer which has the exclusive new Proctor traveling skein protector.—PROCTOR & SCHWARTZ, INC., Philadelphia, Pa.

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607. **GENERAL ELECTRIC EQUIPMENT FOR TENTERS**—Folders including drive and control, guider equipment, welt-straightening controls—providing means of finishing cloth of uniform quality.—GENERAL ELECTRIC CO., Schenectady, N. Y.

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609. **ROLLS AND REELS**—Catalog No. 740—Gives data on "Shaf-tite" roll construction to eliminate loose shafts. Also data on reels.—RODNEY HUNT MACHINE COMPANY, Orange, Mass.

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704. **THE TEXTILE APPLICATION OF METASOL (CALGON)**—Handbook with detail information covering the use of Metasol in Scouring, Bleaching, Dyeing and Finishing.—BURKART-SCHIER CHEMICAL CO., Chattanooga, Tenn.

707. **THICKENING MATERIALS FOR TEXTILE PRINTING**—Describing materials and methods employed in preparation of color thickening so that it may be properly and economically transferred to cloth through the medium of the printing machine.—STEIN, HALL & CO., INC., New York City.

709. **CAUSTIC SODA BULLETIN** — A data and reference book designed for the user of caustic soda. Complete with charts, drafts and formulas.—PENNSYLVANIA SALT MFG. CO., Philadelphia, Pa., who also manufactures Hydrogen Peroxide.

711. **KEY PRODUCTS FOR TEXTILE INDUSTRY**—22 page leaflet describing textile specialties used in dyeing, bleaching, and finishing as applied to Southern textile industry from Southern plants of AMERICAN CYANAMID & CHEMICAL CORP., Charlotte, N. C.

712. **STANDARD SILICATE ALKALIES**—Booklet on silicate of soda for kier boiling, bleaching, water treatment, etc., giving tables for specific gravity, temperature correction, tank capacity.—STANDARD SILICATE DIV., Diamond Alkali Co., Pittsburgh, Pennsylvania.

714. **FUGITIVE TINTS** — Information on water soluble, oil soluble, all types fugitive tints.—TINT SERVICE DIV., United States Testing Co., Hoboken, New Jersey.

715. **AQUAROL AND ARKANSAS PRODUCTS**—Bulletins on Aquarol, water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and rayon, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

717. **FINISH KB** — Finishing compound designed as binder in combination with filling and stiffening compounds. Avoids dusting, insures draping qualities.—SANDOZ CHEMICAL WORKS, New York City.

718. **DOW PLASTIC MATERIALS AND PLASTICIZERS**—Catalog including use of ETHOCEL, readily formulated into clear lacquers used in coating cloth, paper, metal foils or wood.—DOW CHEMICAL CO., Midland, Mich.

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721. **DYES—A FEW FACTS ABOUT THEIR USES AND PLACE IN AMERICAN INDUSTRY**—Booklet covering history, research developments and industrial applications of dyestuffs, with 24 questions and answers to users and consumers of dyes.—Dyestuffs Division, E. I. DU PONT DE NEMOURS & CO., INC., Wilmington, Del.

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726. **WETSIT**—Leaflet describing Wetsit, a synthetic aromatic compound with excellent surface tension reducing properties; gives rapid wetting out and thorough penetration; available in three strengths.—JACQUES WOLF & CO., Passaic, N. J.

727. **THE ONYXSANS**—24 page book describing the application of cation active permanent softeners in textile processing and finishing plants.—ONYX OIL & CHEMICAL CO., 15 Exchange Place, Jersey City, N. J.

728. **SURFAX W.O.**—Leaflet describing a new surface-active chemical which possesses unusual wetting out and softening properties.—E. F. HOUGHTON AND COMPANY, Philadelphia, Pa.

KNITTING . . .

801. **THE WILDMAN SINGLE-HEAD FULL-FASHIONED HOSIERY MACHINE**—Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

802. **RULER AND CONVERSION TABLE**—Converting decimals of inch to millimeters or vice versa. Useful to knitting mills. — THOMAS & SKINNER STEEL PRODUCTS CO., Indianapolis, Ind.

803. **THE TUBE-TEX FOR TUBULAR KNIT GOODS**—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste.—H. W. BUTTERWORTH & SONS CO., York and Cedar Sts., Philadelphia, Pa.

804. **FULL-FASHIONED HOSIERY MANUFACTURE**—Illustrated folder giving the history of full-fashioned knitting and describing in detail the different processes in present day manufacturing and the application of Gulf lubricants to the various machinery.—GULF OIL CORPORATION, Pittsburgh, Pennsylvania.

806. **DEPENDABLE FINISHING FOR MODERN ELASTIC TOP HOSIERY**—Describing and illustrating equipment for basting and attaching insert elastic, attaching wide or welt elastic and seaming elastic in women's hosiery.—UNION SPECIAL MACHINE COMPANY, Chicago, Ill.

807. **CIRCULAR KNITTING MACHINES**—A fifty two page illustrated booklet containing valuable information on the manufacture of transfer top hosiery. Includes illustrations of rib knitting principles, yarn changers, selvage welt, loose course and methods of laying in Lastex.—FIDELITY MACHINE COMPANY, Philadelphia, Pa.

808. **METROPOLITAN SPLIT TUBING MACHINE**—Folder describing new machine for attaching split tubing to athletic shorts, lingerie, undergarments, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

SEWING MACHINES . . .

902. **SEWING MACHINES** — Illustrated technical booklets on high speed lock-stitch sewing machines for all types of work.—SINGER SEWING MACHINE CO., New York City.

903. **FORM 495**—This form enables you to gather your own cost data on your sewing machines and determine whether new Union Special Machines will show big savings. Furnished free by UNION SPECIAL MACHINE CO., Chicago, Ill.

904. **FORM 769. CONDENSED CATALOG**—A 40 page pocket size booklet illustrating and describing sewing machines adaptable for practically all phases of the needles trade.—WILLCOX & GIBBS SEWING MACHINE CO., 658 Broadway, New York City.

MATERIALS HANDLING . . .

1001. **HOW TO DETERMINE WHERE OVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY**—Illustrated folder including elements of materials handling system, preparation of simple layout.—CLEVELAND TRAMRAIL DIVISION, Wickliffe, O.

1002. **CATALOG NO. 22**—An attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use. —MEESE, INC., Madison, Ind.

1003. **CASTERS AND WHEELS**—192 pages, describing casters and wheels suitable for all types of industrial application. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

1004. **MILL BOXES, TRUCKS AND ROVING CANS**—36 page illustrated catalog on Diamond vulcanized fibre hollow ware for textile use.—No. HW9. —CONTINENTAL DIAMOND FIBRE CO., Newark, Delaware.

1006. **LANE CANVAS BASKETS**—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. **HOW HANDLING PROBLEMS HAVE BEEN SOLVED**—A 50-page booklet presenting in pictorial form many solutions to industrial handling problems and showing how they reduce costs, save labor, eliminate storage and provide free movement of stock between processes.—AMERICAN MONORAIL COMPANY, Cleveland, Ohio.

1009. **TRUCK CASTERS AND WHEELS**—24 page illustrated catalog covering casters and wheels for all truck use with specifications. — THE FAIRBANKS COMPANY, New York City.

1010. **PLATFORM AND SPECIAL TRUCKS**—Mill trucks and fibre cars for all textile plant and warehouse uses—50 page illustrated catalog.—THE FAIRBANKS COMPANY, New York City.

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1012. **DANDUX CANVAS BASKETS**—Catalog illustrating and describing "DANDUX" line of Baskets, Hampers and Trucks for the Textile Industry and general use.—C. R. DANIELS, INC., Newark, New Jersey.

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1101. **UNBRAKO SELF-LOCKING HOLLOW SET SCREW**—Bulletin Form 532 includes illustration and descriptive matter of this latest improvement in socket end screws. This bulletin also features the complete line of "Unbrako" Socket Screws.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

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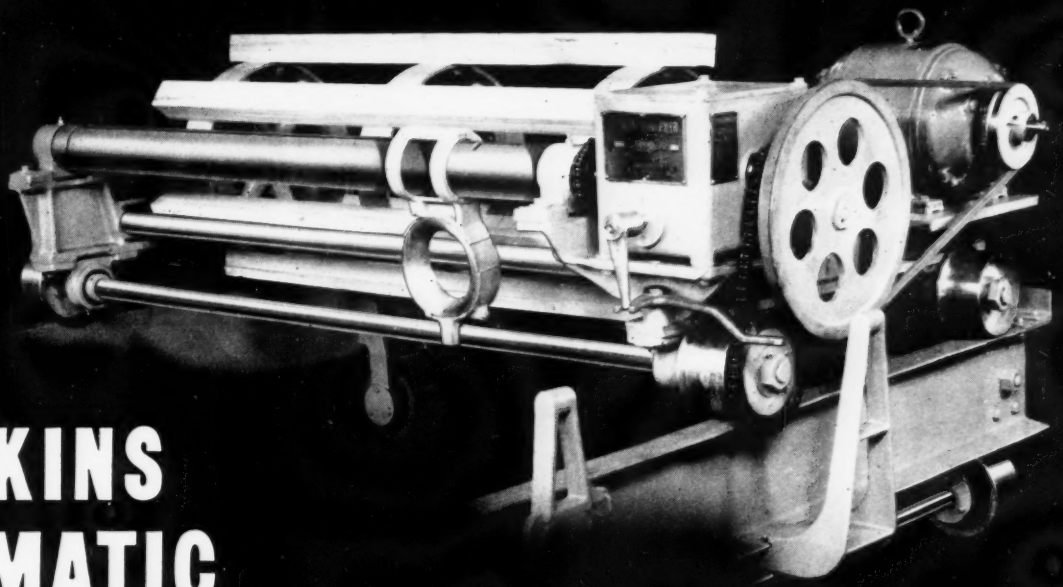

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KNITTING SECTION

Full-Fashioned Management

By Henry Britt

• This is the fourth of a series of articles on management in full-fashioned hosiery mills, though many of the comments will pertain to circular management also. Other installments appeared in the April, May and July 1941 issues. The series is written by a prominent executive, who requested that we not disclose his identity, hence the pen name. This fourth article covers greige inspection, mending and processing of unfinished goods.

THE MODERN greige processing department is a highly efficient branch of the knitting mill, and this department has kept pace with improvements made in other departments of the hosiery industry. With the introduction of modern automatic inspection forms, many of the defects in greige goods ordinarily passed by unseen and undetected are now graded out by the use of these ingenious devices. The efficiency of the plant is thereby increased by this addition to the greige processing room. Fewer returns by the consumer is one of the advantages realized with the use of the automatic form as defects, impossible to discover by any other method are readily brought to light by its use.

Inspection Forms Assist Knitting Department

The knitting department is also materially aided through this medium, as a quicker check can be made on machine defects. Instead of waiting until the goods are finished, or perhaps out to the consumer, many of the defects are now revealed in the inspecting room, usually only a few days after actual knitting has taken place. The modern inspection form not only helps produce better grading, but speeds up production through this department as well. It is not unusual to notice a definite increase in the operator's production, once she becomes familiar with the new machines.

Much progress has also been noted in recent years in the type of mending turned out by most mills. Invisible mending has been developed to a high point of efficiency, coming closer to being an art, and requiring more skillful hands than any other branch of hosiery manufacture. The machine that is used most frequently in the mending department is one that will knit up runners or ladders in the fabric, and then the laddering must be quite long in order to use the machine to any great advantage. Most of the work must still be done by hand, relying entirely upon the skill of the mender to effect a repair that will pass for first quality merchandise. The work turned out by some of these experts is nothing short of genius and naturally has a tremendous effect upon the grading in the finishing room.

Greige mend operators are usually classified in two groups. The first group uses a needle and thread, confining its work to such mending that requires anchoring or locking of stitches, rather than re-knitting. The other group specializes in runs or ladders and such type of work that requires re-knitting with either hand or machine operated latching devices. The first group mentioned will do approximately ten dozen per day averaged out, depending entirely upon the type of work at hand. The second group will do about seven dozen of goods per day, this again depending upon the size of the repairs necessary. It is also customary to keep certain menders on very long runs where a machine can be used effectively.

Runs measuring less than two inches are usually re-knit as quickly with a hand latching device as with a machine. The menders specializing in runs will re-knit the ladder up to the point where it is to be locked in the fabric and then insert a colored thread to prevent further running. The work is then passed on to the needle mender, who replaces the colored thread with a basic fiber and securely anchors the re-knit st'tches to the fabric. The

Courtesy Textile Machine Works

colored thread facilitates the location of the area where the repair is to be made. In our plant this method was found to be the most practical way of handling goods to be mended.

Keep Inspection Standards High

Greige inspecting and mending can be made much easier if the standard of quality expected of the knitting room is kept high. It does not take operators in the knitting room long to discover what goods will pass the inspecting room without rejection and they will govern their own inspection of goods from the machines accordingly. Most mills will permit knitting machine operators to turn in defective goods separately and clearly marked, provided, of course, that the work is satisfactory for mending or for slight irregulars. The number of defects in any one stocking are usually limited to a certain number, preferably one or two, anything over that amount to be mended is not acceptable as usable merchandise.

Mending too many places in one stocking will often cost more than the value of the stocking itself. If the defect is a run or ladder the work is rejected when the run exceeds one or two inches. As earlier stated, defective work is kept separate by the operators and handed in with specially marked tags. By this method the number of mender dozens can be accounted for by the greige processing department and charged against the individual operator's quality record.

It has usually been considered fair practice if a legger is permitted one dozen of mends per week along with his regular production, and a footer three dozen, these amounts representing the maximum that should be expected from an efficient operator. Greater allowances are usually made if the style knit has any lace or other feature which would make it more difficult to keep the number of mends at the foregoing minimums. There are, however, some mills that do not permit their operators to turn in any mends whatsoever. Whether this practice is entirely wise or not is questioned. Usually the operator will allow a greater number of defects to pass into supposedly perfect dozens unless permitted some such arrangement as described. Not all of these defects will be detected by the greige inspectors and consequently a lower grading will result in the finished stocking.

It was customary in a few mills, at one time, to pay the knitters a lower rate for mender dozens, the management contending that this arrangement spurred the operators to make better quality and at the same time helped defray the cost of mending. This system, however, has been discarded because of certain difficulties that arise because of piece rates and also because organized labor is against any method of paying rates that might confuse the operators, such as bonuses, etc. Today, the mill operator must rely entirely upon a merit system of classifying help as to their productive qualities. Penalizing operators for bad work is taboo, as far as direct deductions in their pay envelope is concerned.

Wage Incentive Plan

One of the best plans in use a few years ago for creating incentive among knitters to get better quality was to pay them a bonus of a few cents a dozen for quality and a like amount for quantity. If the quality of a knitter's work fell below a certain standard, by his having too many returns in one week, he lost the entire amount of bonus, including the one for quantity. This became effective regardless of the amount of dozens produced in the week. If, on the other hand, his quality was up to par, but his production fell below the minimum, he would only lose that part of the bonus paid for quantity. A bonus and charge system was also used for needle consumption to create economy in the use of these parts. Nevertheless, it is still important today to keep a close check on the efficiency of the individual operator.

A routine system for posting comparative percentages of bad work for each operator on a bulletin board is a good incentive toward better quality. This method serves a two-fold purpose. It makes the operators conscious of their records and at the same time acts as a warning signal to employees that are falling behind in the quality of their work.

Routing Goods in Inspecting and Mending

The most practical method of handling goods through inspecting and mending is to use a common stock room for both operations and check the work in and out of this room by having the operators call for and deliver their own bundles. The inspectors, in most cases, receive the goods in lots of 5 or 10 dozens, and grade out defects that are to be mended or returned to other departments for correction. The stockings that are to be mended are kept separate and then placed back in the bag on top of the good work belonging to that particular lot. When the mender receives the lot she can immediately locate the goods with which she must work.

The modern inspection form, as earlier stated, not only permits better grading, but speeds up production as well. It is never advisable however, to press inspectors for too much production because the grading will suffer. A production of 60 dozen per day is considered good with newer type forms, though this depends largely upon the operator. Some inspectors can do 90 dozen and still do good work, while others might do only half this amount with any degree of accuracy. These girls usually have to do a certain amount of trimming along with the inspecting in order to catch the long ends missed by the knitters, etc. Attention has to be called occasionally to the other departments in order to prevent an excessive amount of this trimming by the inspector. This eventually can slow down an inspector's production. Laxness in observing such details from one department to another will result in a lower standard of quality, and incidentally will lower production.

Expanding-Type Inspection Forms

The amount of pressure applied to expanding hosiery will vary with the type of equipment in use. Some forms will apply approximately 40 pounds of air, but when multiplied through leverage, actually exert a pressure of 400 pounds. It has been found in mill practice that it is not good policy to use the same pressure for extra sheer hose and for service weights. The reason is obvious. Too many long runs and unnecessary burst holes will result

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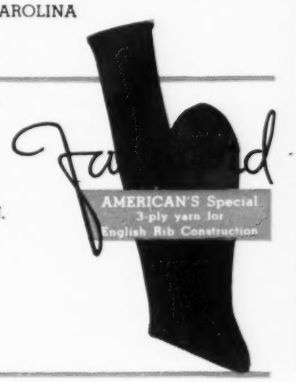

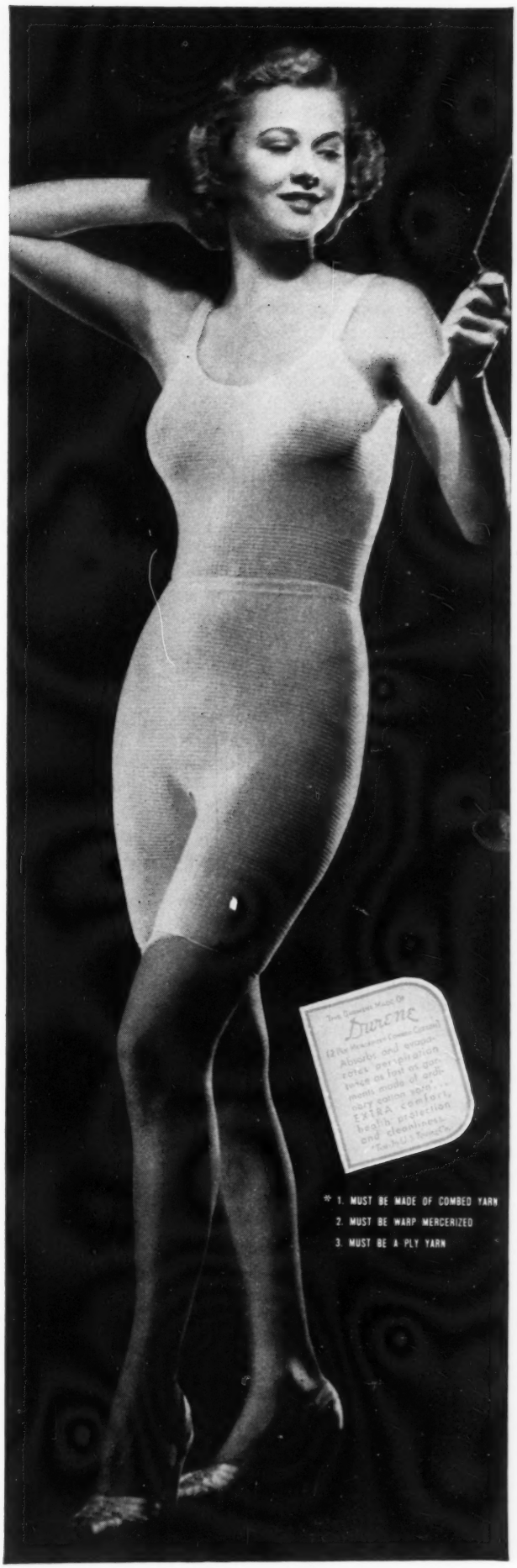

if the pressure applied is greater than needed. The dual pressure system may be used for either sheer or service weight hosiery. Here, the stocking is expanded with a light pressure at first, then inspected, and later subjected to the heavier pressure. Broken or dropped stitches will usually show up on the first expansion, without causing too great a run in the defective area. The inspector can then remove the stocking without ruining it, which would only result if the second pressure were applied to it. The heavy expansion will generally show up such defects as blind narrowings or partially broken stitches or threads.

The type of form using an adjustable or interchangeable toe permits a good inspection of this area because of the close fit obtainable. The necessity of changing toe sizes may at first be objectionable to the operators, but they soon become accustomed to this.

Beside the form itself there is another important implement necessary to the inspector in her work. This is the marking pencil. There are a number of marking materials obtainable which will wash out readily, it is confined to one color Although charcoal, a material much used for this purpose, washes out readily, it is confined to one color and does contain hard spots that may cause pull threads in sheer fabrics. Crayons with a soap base are obtainable in many colors and wash out easily, even in nylon. However, blue soap crayons are recommended for nylon over the other colors.

When the inspector has located a defect which has resulted in a run, she is instructed to mark both ends of the ladder to show the extent of the run at the time of inspection. A small run can develop into one unfit for mending if the mender is inclined to pull at it a little; marking by the inspector helps prevent this. Other defects that are graded out by the inspector are knitting machine defects that must be returned to the knititng room for correction, silk slubs of a nature that can be removed by the menders, defective topping, looping, seaming, etc.

Supervising Work

Spot re-checking or re-examining is a necessary part of the greige processing room. Inspectors and menders need supervision as well as any other department. These spot examiners are usually well trained operators who know exactly what the standards of the mill are, and even these girls are requested to ask the opinion of the forelady from time to time whether certain goods will pass as first quality merchandise. Mending as well as inspecting, is in most mills a piece work operation, and it is only human nature to become careless as to quality unless the individuals know they are being checked.

Bundles for Dyehouse

Greige processing is completed upon final inspection and mending and the goods are now ready for the dyehouse. The bundles are removed from the greige processing stockroom and placed in another stockroom, classified as to styles and sizes. Here the goods are stored until such time they are made up into dye-lots, ready for the dye-house. In making up dye-lots it is customary and advisable to use the oldest knit stock on hand, and gradually work up to fresh stock. Up to this time the original tag remains with the bundle, but by now all the stubs have been torn from it, leaving only the tag proper remaining. The bundle, regardless of the amount contained in it, remains intact until it is broken down into dye lots.

After the dye order is received from the coverage department, the bundles are removed from stock and broken down into 2½-dozen lots and placed in the dye bags. Here the original tag is removed and placed in an envelope, together with similar tags of the same size goods. A form or control card is filled out upon which is entered all the important information contained on the tags. There is one control card for each dye lot, but as many envelopes as there are sizes in the lot The control card and envelopes are given a number, this number being stamped upon a waterproof tag and this tag becomes attached to the dye bag. The identifying tag remains with the lot until boarding, at which time the envelopes containing the original tags are sorted and returned to their respective lots. The lot control card is sent to the recording department for proper entry or clearance of the goods from stock to dye-house.

Handling Re-Dyed Goods

Goods that must be re-dyed are usually cleared through the greige stock room. They are collected from the pairing room and sent to the bagging department where they are sorted for style and size. They are then stored in this room until needed for making up dye lots. Naturally, special identification is required upon bags containing redyes, so that the dye house may be informed of this fact. This identification is carried through to the finishing room and if there are any of these same goods to be re-dyed the second time, another identification is placed upon the lot and these stockings subsequently are classified into sub-standards. Re-dying of goods the second time will not produce first class merchandise, because the fibers in the stockings have a fuzzy appearance due to repeated stripping of the dye.

Occasionally the need arises of stripping finished stock to supply the demand of new shades or the need of eliminating obsolete shades and this work is also cleared through the greige stock-room, much in the same way as regular re-dyers.

Hemphill Company Develops Banner-Lastic Top

Hemphill Company, Pawtucket, R. I., has been assigned a patent for the laying-in of Banner-lastic tops as knit on Banner hosiery machines. Claims provide for laying in the elastic yarn throughout both the top and the edge of the top, while the inelastic yarn is tucked throughout the edge portion. The elastic is laid-in by feeding it to and passing it below the latches of alternate needles and is really held in the wales knitted by intermediate needles. Those are also the wales of inelastic yarn stitches in which the tucking is done. As a result, the elastic yarn draws the tuck wales to the back of the fabric and as it is under some tension, it draws the tuck wales laterally together thereby projecting the wales of plain knitted stitches to the front of the fabric. It can be practiced on both two- and three-feed machines, and may be applied to men's, boys', misses' and children's hose.

Other new equipment items appear on page 82 of this issue.

WILDMAN *Interlock* MACHINE

Produces a wide Range of Patterns

IN FINE GAUGE FABRICS

A great variety of attractive patterns are possible with this Wildman machine, when equipped with pattern wheel. The fine gauge fabrics produced by the Interlock Machine (up to 28 needles per inch) are in great demand for dresses, sweaters, bathing suits, gloves, etc. When properly finished, they look and feel very much like chamois. An exclusive Wildman feature, which feeds the yarn under even tension, results in a cloth of unusual smoothness and uniform weight. Write for complete information and samples.

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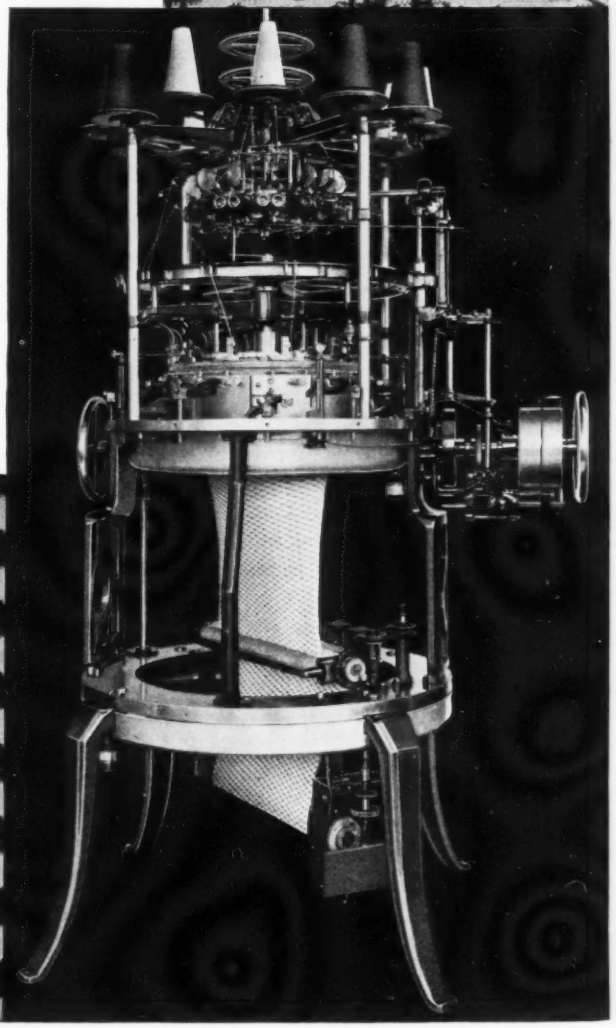
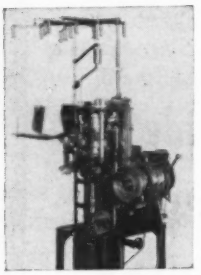


KNITTING KINKS

The Komet Machine

Article 8



IN THIS installment of the series on the Komet machine we shall take up the yarn changing device. Herewith are shown reproductions of Plates 43, 43-A, 43-B and 43-C of the Komet and Links and Links Machines catalog of parts. These plates show in detail the complete Komet yarn changing device and are referred to in the catalog as Five-Feeder parts. We have called attention to the fact on numerous occasions that Komets are different in many respects from other seamless machines, not only in what they can produce but also in design and construction of various devices.

We all remember that many seamless machines purchased during the past few years were simply plain machines, elastic lay-in attachments, horizontal striping attachments and heel and toe tipping attachments, and such machines were and still are extra attachments and must be purchased as such. Today's Komets are complete in every respect; double feed, horizontal striping attachments, heel and toe tipping and laid-in elastic devices are all part of the machine.

The yarn changing device is really a machine within itself in that it makes all ordinary yarn changes, horizontal stripes, takes care of tipping, lays-in elastic and numerous other things. The complete device depends only on two points of control from the machine proper; these are the pattern chain links and motive power to drive the racking frame (101622) shown on Plate 43-1 (in Komet catalog but not shown herewith), this being supplied by the racking gear (101419) and racking crank (101604).

Changing a Komet from plain work to horizontal stripes or from one stripe combination or pattern to another is a simple task and requires only the proper selection and placement of several kinds of pattern chain links and the job is done. This is a far cry from arranging cams and cutter blocks on striper drums. Changing a battery of machines is quite a job and very often we find that certain desirable combinations of stripes cannot be made due to insufficient space for one cycle of the striper drum.

So much for a very brief outline of this extremely flexible device. Now we shall attempt to give some information on its function and adjustment of various parts.

The Five-Feeder Bracket

The complete device is mounted on the five-feeder bracket (101621) shown on Plate 43, which is securely fastened to the top and back of the machine frame. This bracket is a one-piece casting, machined to take care of the respective parts.

Selector Bar and Operating Lever

The selector bar operating lever (101921) is fastened to five-feeder bracket and serves as a connection between the chain links and the yarn changing device. A chain lever plate on the front of the machine makes direct contact with the striper link lugs; the selector rod attached to the chain lever serves as a connection between the chain lever and the selector for operating the lever, thus the operating lever is moved to various positions determined by the respective heights of chain link lugs.

The selector bar (203359) on Plate 43-A fits into the milled slots in the bracket and is in turn moved to the various selective positions by the operating lever (101921). A spring pulls the selector bar back to neutral position after each selection is made.

The selector bar and its operating lever give little trouble. Make sure that the lever moves freely on its pivot and check the pivot screws occasionally as they may work loose and cause an improper selection. Check the selector rod because it must not bind at its pivoting point on the operating lever. The selector bar should move freely in its slots; two adjusting

PLATE 43 KOMET

FIVE-FEEDER PARTS FOR KOMET OR LINKS AND LINKS MACHINES WITH OR WITHOUT REVERSE WELT

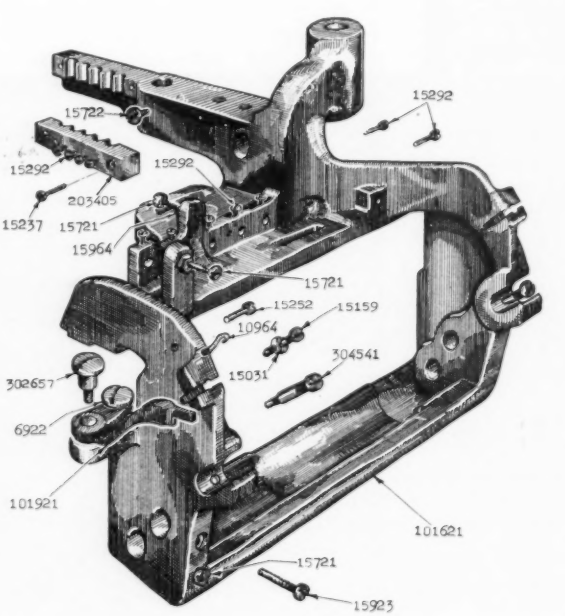


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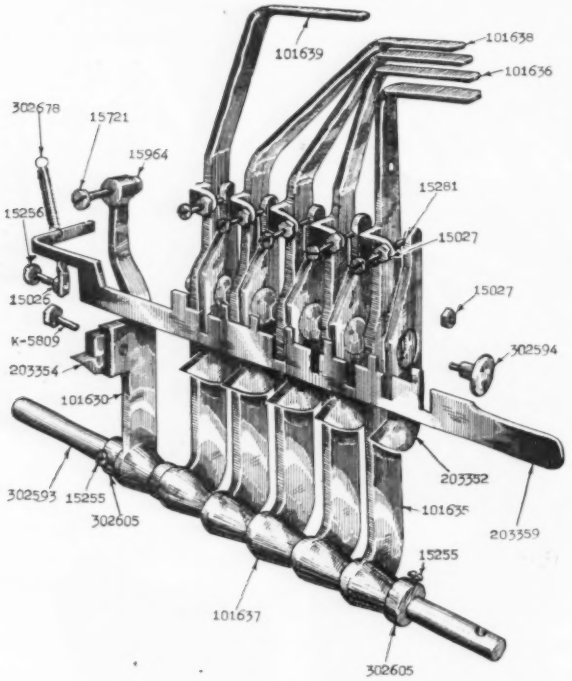
PLATE 43-A KOMET

FIVE-FEEDER PARTS FOR KOMET OR LINKS AND LINKS MACHINES WITH OR WITHOUT REVERSE WELT



screws (15159) with jam nuts are provided to keep the selector bar in place. Keep these screws set to permit the selector bar to slide back and forth freely; up and down play between the selector bar and adjusting screws should be kept at a minimum. The prongs on the selector bar keep the racking pawls out of action. When the selector bar is moved to make a selection the racking pawl falls into a slot and the selection is made, and at the same time a feeder which is in feed position is taken out of action.

Two regular feeders cannot remain in feed position at the same time except the elastic yarn feeder No. 1 and one regular feeder. A complete yarn change cannot be made while the elastic yarn feeder is in the feed position, and only the elastic yarn feeder can be moved into and out of feed position without affecting the regular feeder. A special feeder cam and selector bar are used in this connection.

The selector bar adjusting screw (15026) provides adjustment facilities to make the proper selections; ordinarily when the screw is set to make the selection on a No. 1 link it will also make correct selections on Nos. 2, 3, 4 or 5 links providing the chain link lugs check with the link gauge. At times, however, the selector bar may make a No. 1 and 2 selection properly and fail on No. 3 or No. 4. If this occurs, check the racking pawls to see if they fall in the center of the slot in the selector bar; they may be bent or slightly out of place.

The selector bar is designed to do three things: The high prongs keep the racking pawls out of action when the bar is in neutral position; the next step throws any regular feeder which is in feed position out of action, and the low slots put any selected feeder into feed position.

Two selector bars, two No. 1 feeder operating cams and two No. 1 feeders are supplied with each machine. If the machines are set up to make laid-in elastic tops and it is desirable to change to four or five-color horizantal stripes, it will be necessary to change the selector bar, No. 1 feeder and No. 1 feeder operating cam. Five-color horizontal stripes can be made *without* laid-in elastic or four-color horizontal stripes *with* laid-in elastic top. Tipped heels and toes can be made with either selector bar with or without laid-in elastic top; tipped heels and toes are simply a complete yarn change and two heel and toe yarn take-ups are used when this is done.

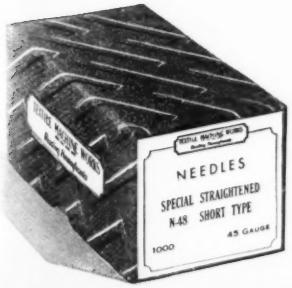
The Feeder Levers

Plate 43-A shows the five-feeder levers assembled, all mounted on the feeder lever shaft (302593). The levers differ somewhat in shape but are identical insofar as their function is concerned. They control the feeder movement to make it engage the yarn, move the feeder into feed position and move it out of action into neutral position. Each of the feeder levers is provided with two adjustments: First, the feeder lever adjusting screw (15281); this is used only to keep the feeder in proper relation to its respective clamp and cutter when the feeder is out of action. When any feeder is out of action the feed end or eye should rest as near to the movable blade as possible without actually rubbing against it. Under no circumstances should the adjusting screw (15281) be used to control the movement or change the timing of any feeder at any position except the neutral position.

The second feeder lever adjustment and incidentally a very important one in connection with yarn changes, is the cam follower (203352). This adjustment provides the means for speeding up or retarding the feeder movement when the feeder moves back to flap in position, forward after flap out of position, forward to feed position or neutral position. Changes are made by raising or lowering the cam follower; raising it causes it to contact the feeder operating cam earlier and lowering it causes it to contact the operating cam later.

The proper place or time to set the cam follower on any of the four regular feeders is when the feeder is fully back and has just come to rest against the feeder stop. At this position cam followers on Nos. 1, 2, 3 and 4 feeder levers should be set to have 1/32-inch clearance between the rear end of the feeder and the face of the feeder operating lever. Some machines will change yarn successfully if the clearance suggested is 1/16-inch or even 3/32-inch; however, even lengths of laps cannot be made if the setting of the cam follower is not kept uniform on all four feeders.

Bear in mind that immediately after the feeder comes to rest against the feeder stop it should begin to flap in so the needles will take the yarn. At this point the end of the feeder should have freedom of action and should not rub against the feeder operating lever. Too much clearance at this point will also cause the feeder lever to vibrate as the feeder cam contacts the cam follower. Vibration will cause the feeder to move slightly when it should be resting against the feeder stop. The cam follower setting suggested will also give the feeder just enough time to flap out before the forward movement begins.



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We shall have more information about feeder adjustments in our next article.

Vertical Swivel Lever

The vertical swivel lever (101630) operates in harmony with the feeder operating levers and in the same manner, however, the cam follower (203354) attached to the vertical swivel lever is not adjustable. The swiveling cam which supplies motion to the vertical swivel lever is adjustable forward and backward, which permits timing the swiveling motion in proper relation to feeder lever and feeder movement.

The horizontal swivel lever (101627) shown on Plate 43-H in the Komet catalog is provided with two points of adjustment; these are fixed stops on the frame of the five-feeder bracket. The horizontal swivel lever is used to flap the feeders in and out during yarn changes and the fixed stops are necessary to control the extreme in and out positions.

At the extreme out position the horizontal swivel lever should move the feeder out far enough so a frame latch held at right angles will just clear the end of the feeder eye, while the feeder moves back at flap out position to the feeder stop. At the extreme in position there should be about 1/32-inch to 1/16-inch clearance between the horizontal swivel lever and the fixed stop when the vertical swivel lever is fully forward.

The feeder eyes should not touch the latch guard when they move in at feed position; the fixed stop is supplied to prevent this when proper adjustment is made. When making horizontal striped numbers, successful yarn changing depends a lot on co-ordinated timing or proper working together of the vertical and horizontal swiveling levers. We shall consider the respective feeders and their action and adjustment in future articles covering Plate 43-E and others.

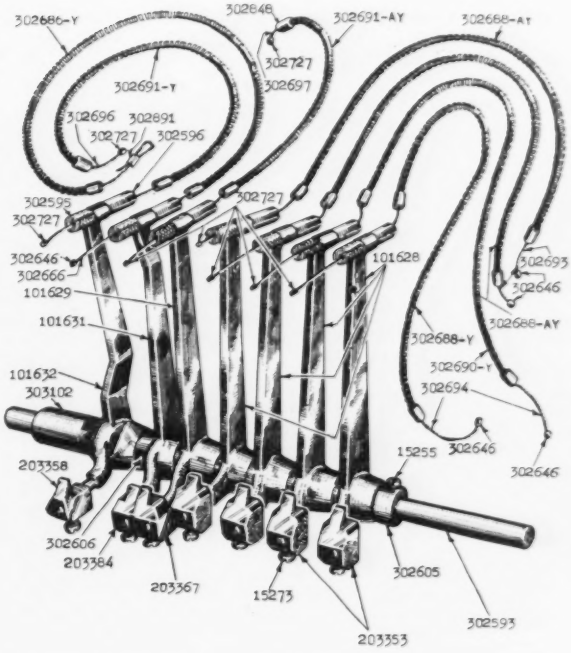
The clamp and cutter levers are shown herewith on Plate 43-B. There are four (101628), one for each of the four yarn feeders. Here again we have some thing entirely different on the Komet. The general practice on other seamless machines is to use one clamp and cutter for as many as six yarns, which often leads to complications when yarn changes are made. Komets have one clamp and cutter for each of the five-feeders and one each for the draw-thread and double-feed feeder. Each clamp and cutter can be timed to open and close at the proper time.

The adjusting cam pieces (203353) can be set to open or close the clamp and cutter on either of the four regular feeders. Moving the cam pieces toward the shaft (302593) makes the clamp and cutter open and close later; moving the piece in the opposite direction makes the clamp and cutter open and close earlier.

Each clamp and cutter lever is supplied with a cable and cable adjusting screw (302595), which provides the means for opening the clamps the proper distance. Here we must be careful in making adjustments. The clamp and cutter operating cam (302597) Plate 43-C will open the clamp the proper distance to release the yarn if the cable adjusting screw is set right, likewise, the clamp and cutter operating cam will open the clamp at the correct time if the cam piece (203353) is properly placed. The

PLATE 43-B KOMET

FIVE-FEEDER PARTS FOR KOMET OR LINKS AND LINKS MACHINES WITH OR WITHOUT REVERSE WELT



safe way is to set the cable adjusting screw first so the clamp will open just enough to release the yarn and then set the cam piece so the yarn will be released at the proper time in relation to feeder movement.

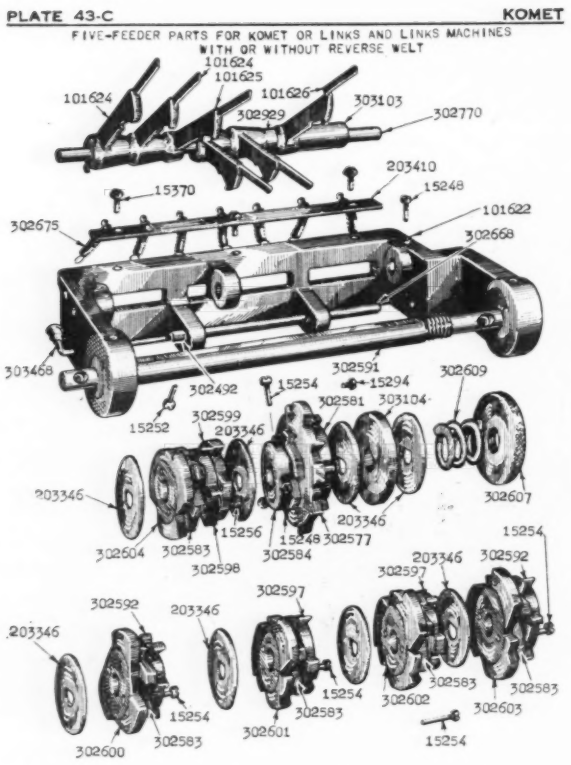
If, when making yarn changes, the yarns are being pulled out of a closed clamp or still worse being broken instead of the ends being released, you may be sure your clamp and cutter controls are not timed or adjusted properly.

Next to the four (101628) clamps and cutter levers, we see the No. 5 feeder clamp and cutter lever (101629). The No. 5 feeder has a clamp and cutter located immediately back of the four regular clamps; the No. 5 clamp and cutter operate in a similar manner as the others insofar as adjustment and timing is concerned. Next to lever (101629) is lever No. 6 (101631) which operates the latch retarder used in connection with making plaited numbers. We shall consider this part at a later date.

The last lever on the shaft is No. 7 (101632), which is the slackening lever. Like the others it is controlled by the cam piece (203358) and the slackening cam (302557) Plate 43-C. As its name implies this device provides the means for slackening the stitch during yarn changes while striping and otherwise for ordinary yarn changes. It can be put into action or out of action by the cable adjusting screw (302595). Whether or not it should be used depends on the kind and size of yarns being used and the degree of loose or tight knitted fabric being made. The machine fixer can readily determine when and if the slackener is to be used.

The Racking Frame

The racking frame (101622) is shown herewith, including all parts necessary to make up the complete racking frame assembly. The six racking pawls are pivoted on shaft (302770); each pawl moves one rack



wheel and each rack wheel in turn has an operating cam attached to it—thus motion is supplied to move feeder levers, clamp and cutter levers, vertical swiveling lever, etc.

All rack wheels and operating cams revolve on shaft (302591) and are kept under control by the friction spring (302609) and friction discs (203346). One rack wheel is adjustable and this is (302584). This wheel operates the vertical swivel lever and the slackening lever and is therefore adjustable so that swiveling can be advanced or retarded in relation to feeder and feeder lever movement. All other rack wheels and operating cams are non-adjustable since the respective cam followers answer this purpose.

Excessive pressure on the friction spring should be avoided since each rack wheel moves independently and too much friction would hinder such action. Excessive friction will cause the friction discs to become galled and make several rack wheels move at once.

Do not flood the rack wheels and friction discs with oil because a very limited amount of oil is required for these parts. Oil the racking frame bearings at least every other day and likewise for the racking levers and the oil tube (303468). These parts are constantly in motion and therefore should not be overlooked in the matter of lubrication.

Recently we had some trouble with racking pawl springs breaking in the loop where it hooks onto the racking pawl hook. We overcame this trouble by making a wire link about ½-inch long and wide enough to slip over the pawl hook. The loop on the spring when attached to the wire link will not become cut by pawl movement as it does when the spring is attached to the hook on the racking pawl.

In the next article we shall consider the latch retarder, clamp and cutter bracket assembly and feeder guide bracket assembly.

K. O. METZ.

Methods to Prevent Pull Threads in Nylon

WHILE discussing the processing of nylon full-fashioned hosiery with several mill men, the editors learned that pulled threads are one of the main causes for faulty merchandise, and in order to pass information along to the industry on methods of preventing pulled threads, the two following letters from mill superintendents are given:

EDITOR COTTON:

We consider that the most difficult problem in manufacturing nylon is the handling. Our entire nylon manufacturing operations are on 30 denier stockings. Our experience, therefore, has been with this type stocking altogether, and the method of handling nylon that we employ has certainly not entirely eliminated snags and pulls, but it has materially helped in reducing them. The writer would be grateful for further ideas on preventing nylon pulls and snags.

In the first place, we have completely covered every surface that is practical to cover and that is likely to be contacted by the nylon fabric. All knitters' cabinets, topping stands, chairs, cabinets and boxes are covered with cotton sheeting slip covers.

We have extended this idea of preventing the material from contacting any rough surface to the footing machine. On the sections of our footing machines we have attached a cloth to the transfer bar shaft, permitting this cloth to hang over the starter rod down to within 18 inches of the floor. The take-up strap is permitted to work through this cloth by having provided a necessary slot for its operation. This prevents the nylon fabric from contacting any metallic surfaces while knitting the foot portion of the stocking.

In the second place, all operators handling nylon are required to wear soft cotton gloves. As soon as the carriers are slipped back on the legger and the ends broken, the knitter dons his gloves before moving the set from the machine. These blanks are handled very carefully and placed on the knitters' cabinets. They are immediately wrapped in one dozen bundles with a dark cloth especially designed for this purpose. This cloth completely covers each dozen pair of leg blanks, and they are transferred to the toppers in this condition.

The knitter on the footing machine is also provided with gloves which he uses to remove the complete set of stockings. The knitter places the stockings as soon as he has a one-dozen bundle into bags. They are transferred in this manner to the looping and seaming department. Our greige examiners, menders, preboarding operators and boarders all use gloves. Emphasis is also placed on employees wearing the proper type of clothing in order to avoid any unnecessary snag hazards from glass buttons, belt buckles, etc.

We have given some thought to the matter of using properly lined and designed baskets. The type of basket that would have to be used would in our opinion be quite bundlesome and would not permit

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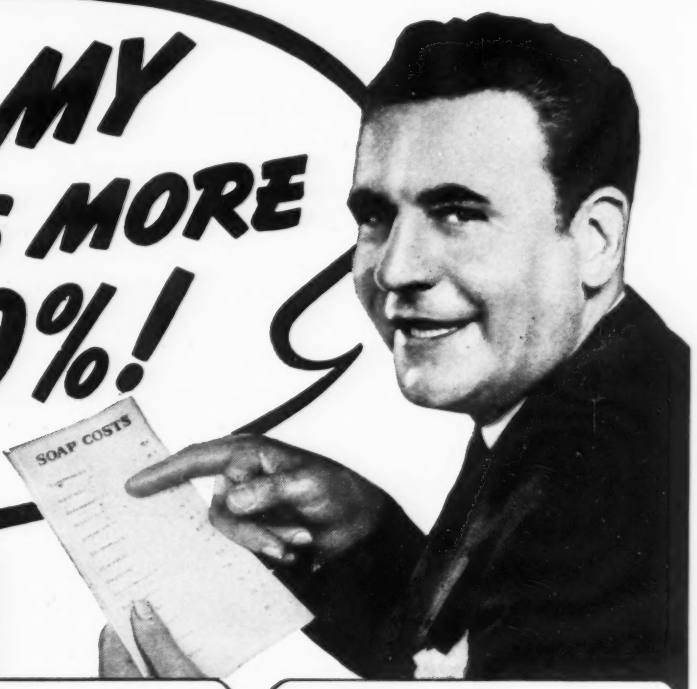

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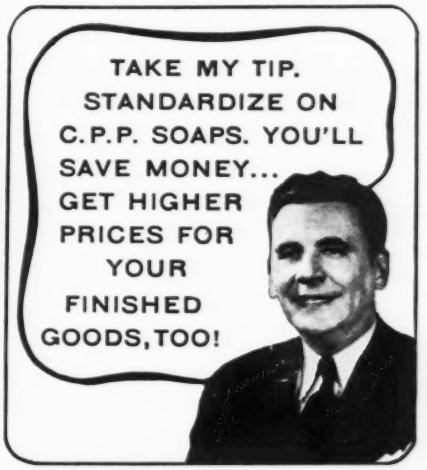

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efficient operation, particularly if space is limited.

CONTRIBUTOR NO. 7161

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EDITOR COTTON:

With reference to system for handling nylon hosiery, would say that our system is purely one of the same type or types as handling pure silk goods, which we had to develop to a much higher point of finish or efficiency as related to pure silk, even chiffon silk. In other words, we found the equipment that we had been using in a satisfactory way on chiffon hosiery, both in grey and finished, such as trucks, bins, trays, tables, etc., was totally unsuited for nylon hosiery due to the outstanding snagging characteristics of nylon, so we had to put on a campaign of polishing and smoothing up all surfaces that nylon hosiery might come in contact with, and have special trucks and baskets made up of softer finish and lighter canvas than used in ordinary baskets with silk hosiery.

We have to give special attention to condition of employees' hands in all the different operations, both in grey goods and finishing departments, and operators such as men in dye house, boarders, etc., are required to wear gloves while handling nylon.

Our system, while possibly peculiarly our own, is undoubtedly not very different from any other manufacturer producing nylon hosiery who is doing a good job in controlling pulled threads and other damages that easily develop in the manufacture of nylon hosiery.

CONTRIBUTOR NO. 7162

Degumming-Bleaching Mixed Half-Hose

EDITOR COTTON:

In regard to the question of "CONTRIBUTOR NO. 7168", which appeared on page 116 of the January issue, will say that the best method I have found for the degumming and bleaching of rayon and silk mixed half-hose with double resist acetate clocks, is as follows:

First, the goods are entered and the bath raised from 180 to 190 degrees F. To the bath is added from 6 to 8 per cent of olive soap with 2 per cent sodium-pyro-phosphate. The amount of time for degumming is to be determined by the dyer. If just a small amount of silk is in the stocking it would not take over 20 to 25 minutes. For best results at least 20 per cent of the gum should be left in the silk. After the proper degumming is obtained then the goods should be given two warm rinses at 130 F.

The bath is brought back again and heated to 100 F. The bleaching agents, namely, peroxide and silicate, are entered at this point, with a very small amount of olive soap. This should keep the foreign matter off of the bleaching material. The ratio should be kept to three parts of peroxide to one part of silicate.

The bath is then raised slowly to 160 F. The silicate in the bleaching bath will degum the remaining part of gum left in the socks. The gum that has been left in the socks will help to slow the bleaching action of the silk, also to allow the cotton to start its bleaching ahead of the silk, thereby helping to eliminate the possibility of the silk over-bleaching, to allow the cotton to be bleached.

After the goods have run at 160 F. for 10 minutes, then constant watch should be kept to attain the proper whiteness desired. When this is obtained, two warm rinses are necessary, and then finish as desired.

CONTRIBUTOR NO. 7182

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EDITOR COTTON:

Answering "CONTRIBUTOR NO. 7168" on degumming and bleaching mixed half-hose, I would say that if the hose contains no thread silk, the bleaching can be successfully done by first scouring the hose with some good detergent fortified with one-half to one per cent snowflake crystals or sodium-tetra-pyro-phosphate for 20 minutes at 190 F. Rinse. Bleach with sodium-hypochlorite; raise temperature to 130 degrees F. for twenty minutes or until degree of desired whiteness. Sour—rinse—soften.

Note. Be sure bleaching solution is made for this purpose or the color on double resist clocks will be partially destroyed.

When thread silk is part of construction and is to remain white, degum silk first, bearing in mind to use just sufficient materials to remove gum. A good grade of soap with a little pyro-phosphate or pyro with sodium alkylarylsulfonate will do the trick. Do not elevate temperature above 200 degrees F. and cut the time as short as possible. The care in the degumming insures brighter resist and original shade clocks. The degumming should be complete in about 20 minutes. This, of course, depends on amount of silk. The goods are rinsed and bleached in a neutral bath or as nearly so as possible with 5 or 6 per cent hydrogen peroxide, 3 per cent sodium silicate, temperature around 175 degrees F. Run until desired whiteness is obtained.

The all-rayon with acetate clocks can also be bleached by the hydrogen peroxide process with equal results. But the silk, due to the action by the hypoclorite, cannot be bleached by the first method.

CONTRIBUTOR NO. 7186

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EDITOR COTTON:

In answer to "CONTRIBUTOR NO. 7182" who would like to know the most successful method of bleaching rayon and degumming and bleaching rayon and silk mixed half-hose which have double-resist dyed acetate clocks knitted in, I will give the following method:

For rayon half-hose containing dyed acetate clocks knitted in, I would scour at not over 140 degrees F. with some tetra sodium pyrophosphate and pine oil soap, providing the acetate yarn will stand this temperature without losing or changing color. Then, after a rinse, I would bleach the hose with a low pH chemic bleach, provided this would also not affect the dyed acetate.

For the degumming and bleaching rayon and silk half-hose with the dyed acetate clocks knitted in, I would first degum the silk and scour the rayon with a boil-off soap solution containing a small amount of

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pyrophosphate. Then after a rinse, I would bleach in a ½ volume (one half gallon hydrogen peroxide per 100 gallons) solution, containing about 3 pounds silicate per 100 gallons by submerging overnight, with an initial temperature of about 120 degrees F. This bleach will also do for the rayon hose mentioned.

The limiting condition in the matter is the fastness of the colored acetate to both scouring and bleaching. These colored acetates are usually fast to reasonable laundering, but not to the higher temperature scouring or bleaching, so that they are used on bleached yarn hose; that is the hose are made of bleached yarns throughout, so that they are finished by a much less treatment than they would need for bleaching, if knitted in the grey.

It might be also stated that experimental laboratory tests should be made with each different colored acetate clock relative to the temperature that each will stand under all of the processing conditions, and that the foregoing stated methods should be governed by the results of these tests.

CONTRIBUTOR NO. 7190

Leveling Gauge for Picot Bars

EDITOR COTTON:

Leveling picot bars on a full-fashioned machine by using the tops of the needles as a straight line is usually a tedious task, especially when one must go over the whole machine. Moreover, as we have nothing to go by except vision, quite often the bar is not exactly level even though it appears to be. Again, if it so happens a needle bar is either a little high or low, that respective picot bar shall no doubt be set to a different height than the others. Thus, if the needle bar is eventually re-set, it only means our picot bar might have to be re-set also.

While a fairly good job may be accomplished by leveling with the needles, enough so that the bars will function properly, a much better and quicker method is to use a gauge, thereby assuring positive leveling and sameness of depth of all bars. It is certain they should be no lower or higher than the tips of the narrowing points as they go through the same motion when taking off and delivering the loop.

With this gauge speed and accuracy is assured, minus the strain on the eyes. First obtain a straight edge about 18 inches long, one-half inch high and three-eighths of an inch thick. Two more pieces of metal are necessary for the back. These are about three inches long, one inch high and one-quarter of an inch thick. They are attached to the straight edge as per diagram, two screws being sufficient to hold them in place.

When intending to use this gauge, first loosen up the bottom screws of the picot bar. Hold the gauge with one hand, sliding the pieces marked "A" behind the narrowing points and pressing the straight edge against the tips of the narrowing points. With the free hand press the tips of the picot points against the straight edge "B" and then tighten the screws. This can all be accomplished in a few seconds and there is no doubt but that the picot bar is level.

ERSKINE ROOT

Checking In and Out at Shift Change

Problem of registering employees in and out quickly to prevent paying overtime . .

EDITOR COTTON:

I would like to know how other knitting mills are handling the problem of getting the first shift registered out and the second shift registered in. We have some two hundred or more employees on each shift and according to the law, we cannot allow anyone to stay in the mills over seven minutes after their eight hours. If they fail to register and get out of the mill in this seven minutes, we must pay them time and a half overtime for one-fourth hour.—CONTRIBUTOR NO. 7223.

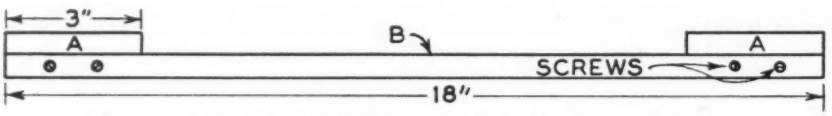
EDITOR COTTON:

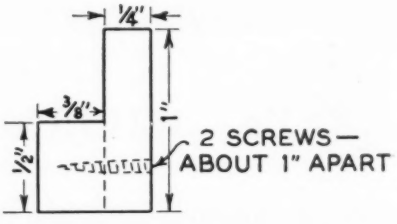
Regarding the problem of registering one shift out of a mill in sufficient time to prevent the need of paying overtime, I will describe the method that we use for the benefit of "CONTRIBUTOR NO. 7223".

In our plant we have a 15-minute interval between shifts. This promotes orderliness in checking in and out and prevents confusion. At two minutes to stopping time, which happens to be three o'clock, we sound a warning signal so that the operators know how much time is left in which to stop their machines.

Many of the machines stop at that time rather than continue on until stopping time, as the machine may not be in a convenient place to stop when the final signal is given. This must be left up to the discretion of the operator and to the rules set up regarding the position of the machine at stopping time.

At ten minutes to starting time of the second shift, the operators are permitted to start entering the building and they first change their clothes before registering in at the clock. Very few have registered by the starting signal and some register even one or





Backs of narrowing points rest flush against extensions "A". Straight edge "B" contacts tips of picot and narrowing points. Right, side view.

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Whether your problem is the finishing of hosiery . . . or the processing of rayon, spun rayon, cotton or Bemberg, we believe we can help you. Our entire laboratory facilities—our time and our experience—are at your service. Write us.

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two minutes after this time, which, of course, is better than too soon.

No trouble is experienced by using this method and as our plant is very large, the same method could be applied to small mills without any unnecessary confusion or paying overtime.

CONTRIBUTOR No. 7224

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EDITOR COTTON:

I presume that your "CONTRIBUTOR No. 7223" has one time clock for all of his employees, and I imagine that he would have some confusion. We do not use a time clock and consequently do not have the checking in and checking out problem to contend with, but it would be our suggestion that "CONTRIBUTOR No. 7223" get another clock.

CONTRIBUTOR No. 7225

Drop Stitches

Has drop stitches in looper waste and in the loose course. Methods are given by two men to eliminate this trouble.

A RECENT inquiry to the editors of COTTON submitted the following problem: "We are knitting a full-fashioned rayon stocking with two ends of rayon in the heel, and we are having considerable trouble with drop stitches starting at the end of looper waste and running back past the loose course. Much of this trouble occurs in the footing operation when the stockings are hooked to the ware roller straps. We are enclosing samples of the defective work and hope some of your readers can assist us in our problem."—CONTRIBUTOR No. 7213.

Without disclosing the source of the inquiry, the editors passed the problem along to two mill men and the following answers are as given by these men:

EDITOR COTTON:

Answering "CONTRIBUTOR No. 7213", we assume he is certain that the stitches are not dropping off when the loose course goes in, and if this is true our suggestion is that he run more courses of looper waste and have the operators cut off the tips of the heels, which will form a jagged line of loops that only extreme pull will cause a break-through into the heel tab. This is a common practice in some mills, primarily to prevent the unraveling of the heel tabs before completion of the stocking. As a test if he will cut off one heel he will find it takes much more pull to create a run than on a heel which has not been mutilated. It can readily be seen that by cutting into the even rows of loops it creates a condition which permits a loop to practically run itself out before doing any damage.

We feel positive this will overcome his difficulty, but he might also try tightening up on the slacker after the loose course. The tighter the stitch, the less chance there is for individual loops to run wild.

CONTRIBUTOR No. 7216

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EDITOR COTTON:

As to the problem of "CONTRIBUTOR No. 7213", I am going to give you three remedies that have proved successful in eliminating this trouble:

1. Two or three courses after the looper line is made, feed the slacker all the way down, making the stitch the same size as when knitting the boot of the stocking. This makes the looper clipping real tight, reducing the chances of runs. Ten or twelve courses of this tight knitting is sufficient.

2. After making looper line run about three courses, pull in the cotton raveling carrier and run it about 10 courses across connecting the two outside heel selvages. Run these courses as tight as possible. This cotton is run right in with the other yarn. After pressing off the set the knitter can cut the cotton out between the two inside heel tab selvages.

3. Run about 10 courses after looper line and rack narrowing fingers out and put picot bars down and put a picot or lock-stitch in heel tabs. This will lock the stitch so it will not run back.

These three methods will also prove effective in running nylon.

CONTRIBUTOR No. 7219

An Eye on the Knitting Mills

Duplex Hosiery Mills, Inc., Asbury Park, N. J., a recently organized concern, has taken a lease on the Durand Building, Railroad Ave., and will improve and equip the building at once for a new mill. Samuel Paris will be manager.

Grover Knitting Mill, Ltd., Montreal, Canada, is building a large extension at an estimated cost of $100,000. The 5-story addition will be built of steel, concrete and brick and completion is expected by September.

Elmar Hosiery Company, Anniston, Ala., successor to the Coosa Textile Company, will occupy a new building 134x36 feet, which was constructed both for expansion and for conversion to other uses.

Alabama Hosiery Mills, Decatur, Ala., will soon have underway an expansion program costing $75,000 designed to increase the plant's production of nylon hosiery. The mill makes ladies' full-fashioned hosiery.

Belmont Hosiery Company, Belmont, N. H., manufacturers of rayon full-fashioned hosiery, will install additional machinery for the production of nylon hosiery.

Madison Knitting Mills, Inc., New York City, a recently organized company, plans early operation of a knitting mill in the Bronx. Outerwear will be made.

Menzies Company, Hickory, N. C., is a new concern formerly known as Henderson-Menzies Company; the new concern will install equipment for dyeing half-hose and anklets.

Goodwill Hosiery Mills, Fort Payne, Ala., have had the name changed to M. G. Clark Hosiery Mill, being named after the owner. The mill makes elastic top half-hose.

Cheraw (S. C.) Hosiery Company has been purchased by Harry A. Kelly and Jame O'Conner of the Whitehall Knitting Company, Mt. Holly, N. C.

Siler City (N. C.) Hosiery Company will build an addition to house a new humidity and temperature control system.

Yount Hosiery Mills, Newton, N. C., has added more equipment to the plant.

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People born under the sign of VIRGO, which extends from August 23 to September 23, are generally SHY and RETIRING at heart, but cover up by making as loud a NOISE as possible. They often try to bluff their way around when there is absolutely NO NEED of it, because they are the kind of PEOPLE that folks like to trust anyway. They are GENEROUS to a fault, FAIR-MINDED and TACTFUL when not excited. Dent a Virgo native's fender with your BUMPER and he will set up a howl that would raise even a POLICEMAN. But when the affair is over he will give you an even break on the bill—and maybe INVITE you to dinner. Virgo natives make good school teachers, office managers, truck drivers, farmers, and KNITTING MILL SUPERINTENDENTS

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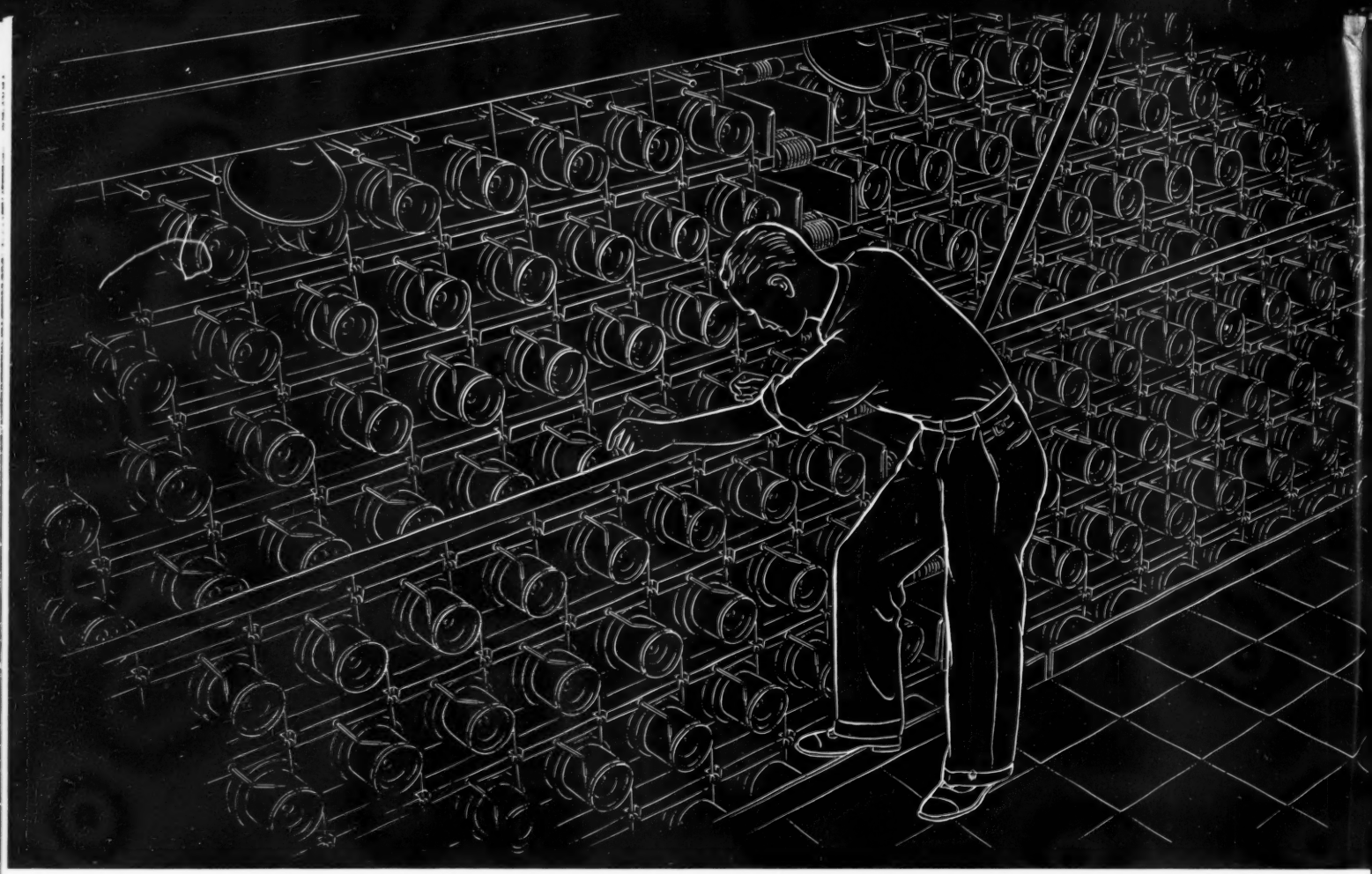

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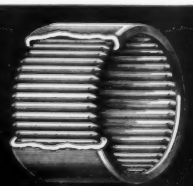

TRENDS AND HIGHLIGHTS OF THE KNIT GOODS MARKETS

Unbranded Full-Fashioned Mills Take Price Initiative Away From Branded In Fall Markups—Branded Have Made Few Changes —Chain Store Volume A Factor In This Development—Armament Orders For Half Hose Make Such Lines Tight For Civilian Deliveries—Higher Commodity Prices, Taxes And Wages Make Manufacturers' Position Difficult Under Ceilings

July 16, 1941

SHIPMENTS OF ALL TYPES of hosiery during the first five months of this year were 11.2 per cent ahead of the same period a year previous with a majority of divisions of the industry registering upturns but with the larger gains in the half-hose and seamless field where Army and Navy orders have played an important part in recent months. Full-fashioned hosiery shipments during this period were up 7.3 per cent compared with a year previous but this percentage gain compares with an increase of 339 per cent in seamless wool lines in which heavy Army buying has been apparent. During the first five months of the year shipments of nylon totaled 2,751,493 dozen pairs. Price advances are the rule in all branches of the knit goods industry but in branded full-fashioned lines the trend is slow compared with the upturns that have been already made in unbranded numbers, indicating that branded mills feel they should make up some lost ground.

Full-Fashioned

Although raw silk is higher, throwing costs have been advanced sharply during the first half of the year and manufacturers have done a record first half volume, branded mills opened their fall lines with few price changes. Two of the larger operators are quoting prices unchanged at least to the end of July but indications are that after these mills get a little more business in hand they will advance to conform with upturns that already have been made in the unbranded field. This type merchandise has been advanced 10 to 20 cents per dozen and one explanation by branded firms for their generally unchanged lists is that chain stores are buying so much merchandise from unbranded that they must offer keener competition.

There is still an advantage to mills making these lines to offer nylon along with their silk numbers, demand for nylons being good but not so tight in respect to deliveries as several months back. One branded mill, the Berkshire, late in June announced advances of 10 to 25 cents per dozen but the firm made no change in its nylons; Gotham in its new list made no important changes on most of its numbers and it also made no change in nylons; the only changes made by Van Raalte were a reduction of 50 cents per dozen to $8.50 on one silk number and cuts of 10 cents per dozen to $9.75 on its 51-gauge nylon stockings but Holeproof said as of July 15 it was making an advance of 50 cents per dozen on two 42-gauge silk numbers, going from $6.00 to $6.50 per dozen. Some mills have a large amount of business already for fall but there are as many that say buying has not been brisk with them as yet. The outlook is for hardening in these prices if silk stays around the $3.00 level in view of possible wage increases and other higher costs for manufacturers. Wage negotiations with the union are scheduled to begin July 16 or 17.

Half-Hose

This is about the tightest spot in the hosiery industry so far as deliveries go, most being well sold ahead so that it is not a question of placing orders with manufacturers but rather of getting mills to take business for the shipments wanted. Recent statistics indicate this condition. Shipments of half-hose and slacks for the first five months this year were up 21.2 per cent compared with the same weeks last year but in this section of the industry there are wide differences in the mill situation.

Full-fashioned half-hose shipments are way down compared with a year previous with a smaller drop in seamless silk. But in the case of seamless rayon, shipments in the first five months were up 11 per cent; seamless cotton up 27 per cent but with seamless wool up 339 per cent. The latter section of the hose trade is loaded with military orders so that in many cases they have been unable to make wanted deliveries for the civilian trade. Shipments of athletic socks are up about 5 per cent but the slacks or short socks show a nice gain of almost 14 per cent over the first five months of 1940. Fancy half-hose deliveries are very tight.

Seamless

Although women's seamless lines show no great gain over a year previous other sections of the seamless end do and in these there has been a lot of forward coverage coming from buyers that wanted to get down all the business possible before the wage advance comes the middle of September in the seamless end of the business. Buying of this character has been so heavy that some are expecting the seamless end to become less active after that date but fears of this have become less marked in recent weeks. Children's and infant's lines are also in a very well sold ahead position with deliveries with some mills being a problem over the next few months and with prices strong on account of higher yarn costs, higher wages to come shortly and higher taxes. Shipments of anklets for the first five months this year were up 6 per cent compared with the same time in 1940 while those in children's and infants' goods were up almost 18 per cent. Due to a decided improvement in the whole business picture there has been an increased demand for bundle goods and shipments are up 46 per cent with tight deliveries from many sellers.

Underwear

There will be a hearing September 15 in Washington on the 40-cent wage minimum for the knitted and men's woven underwear and commercial knitting industry that was previously scheduled for July 9. The postponement was announced by General Philip B. Fleming, administrator of the wage and hour division. It will be at 10 A.M., in Room 3229, Labor Department Building before Henry T. Hunt, principal hearing examiner for the division. Any person interested in appearing at this hearing should notify the administrator not later than September 5. The committee for this branch of the business had made a recommendation that this new rate should become effective November 17 and it is regarded in the trade likely this recommendation will

Textile Machine Works Wins Navy Award

TEXTILE MACHINE WORKS, Reading, Pa., was chosen as one of the first fourteen plants qualified to receive the flag of the Bureau of Ordnance, Navy Department, and the highly-prized Navy "E" award, as a recognition of outstanding performance in the production of naval ordnance materials vital to national defense.

This concern, America's largest producer of full-fashioned hosiery machines, has been devoting more than 50 per cent of its production to defense work, and its affiliate, the Narrow Fabric Co., has also been participating in defense work on a large scale.

The Navy presentations, the first of their kind in the present emergency, were made on Friday, July 25, by Secretary Frank Knox in his office in the Navy building. Newsmen were present, together with a battery of newsreel and press photographers.

"Anybody familiar with the Navy," Secretary Knox told his guests, "knows what the letter 'E' means on the bridge, conning tower, funnel or turret of a naval vessel. It's the highest service award the navy can make; it means excellence or special merit," and declared the award of the "E" to management is the Navy's way of saying "Well done" to them.

Secretary of the Navy Knox is shown awarding the Navy "E" for the Textile Machine Works. Left to right: **Samuel R. Fry**, executive of the Narrow Fabric Company; **Louis Thun**, assistant treasurer of Textile Machine Works; **Secretary Knox**; and **Dr. John E. Livingood**, vice-president of Textile Machine Works. A flag bearing the emblem is now flown over the plant; and employees wear lapel buttons bearing the emblem.

be accepted. As wages since May 6, 1940, have been at a minimum level of 33½ cents it is seen that a big difference in mill costs will follow. In view of this, mills opening lines of cotton ribbed suits for late 1941 deliveries have named prices that show marked increases, one quoting men's suits on the basis of $7.50 per dozen for 12-pound while the men's shirts and drawers in the 10-pound numbers were priced at $5.75. Due to heavy Government purchases in some numbers there is a very tight delivery situation for the civilian end of the business. Most knitters on underwear are operating very actively.

NLRB Ordered To Re-open Berkshire Case

United States Circuit Court of Appeals in Philadelphia ordered the National Labor Relations Board to reopen its "unfair labor" practices cases against the Berkshire Knitting Mills, hosiery manufacturers of Reading, Pa. At the same time the court recommended an investigation of charges by the company that Edwin S. Smith, one of its members, took part in a hosiery union boycott against the company and was biased against it when the board issued a sweeping cease-and-desist order on November 3, 1939. In the decision written by Judge Herbert F. Goodrich no opinion was expressed whether there was any foundation to the charges but it said they were of such gravity that they should be looked into by the entire board and if proved by the company would show that Smith was not impartial and was disqualified to sit in judgment in the case.

The decision added that the remaining members of the board should reconsider the case in its entirety if they find Smith had disqualified by his actions. The court's order was made in counter petitions by the board for enforcement of its order on the company to disestablish the Berkshire Employees Association, an alleged company union, and to re-instate several hundred employees who took part in a prolonged strike in 1936 with back pay and also to cease and desist in opposing efforts of Branch 10 of the American Federation of Hosiery Workers to organize the employees. Charges by the company against Smith grew out of his asserted urging of Louis E. Kirstein of William Filene Sons Co., Boston department store and a large customer of Berkshire Knitting Mills, to try to persuade Berkshire to accede to the union's demand.

Henderson Revises Coarse Counts Combed Ceiling

Differentials on coarse counts of combed yarn have been revised by Leon Henderson, chief of the Office of Price Administration and Civilian Supply. This amendment is retroactive to May 23, the date on which the original schedule was issued and the change was made after combed spinners had filed a recommendation that the coarse count differentials be changed from ½-cent per count to ¼-cent per count, making a considerable difference in the price of such counts as 10s and 12s. At the same time the Government amended the original combed ruling to exempt yarn for export from the maximum quotations. Lifting of the ceiling on exported yarn applies both to sales made directly or through a jobber. Such yarn cannot subsequently be sold or delivered for use within the United States at a price above the maximums established in the schedule for domestic sales.

This amendment is not expected to result in sales of yarn at prices much higher than necessary to cover higher costs of selling for export. The combed yarn schedule was based on a price of 42 cents a pound for 30s single and the revision in it has placed combed spinners in a much more favorable position. This can be seen when it is recalled that under the original ruling 10s single was listed at 32 cents while in the amended list the same yarn was priced at 35½ cents. In regard to the exemption of yarn for export from the maximum quotations there was some feeling in the spinning trade that this might result in larger quantities of combed yarn being sold abroad and at a time when every pound is in urgent demand in the United States where large amounts of both single and ply yarn is going into national defense contracts, for both cloth and knitted garments such as hosiery and underwear.

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Reduce Hosiery Varieties Constantine Recommends

Earl Constantine, president of the National Association of Hosiery Manufacturers, addressing a Chicago meeting of hosiery manufacturers, declared that the hosiery industry must prepare itself for a possible reduction in the variety of its products. He said that industry in general will be wise in voluntarily beginning to cut down the number of styles and varieties, adding that even in staple hosiery there is without doubt too wide a range of constructions and perhaps also of colors. Mr. Constantine said this certainly is true in stylized hosiery including men's fancy anklets and women's hose. He forecast that 1941 will be a record year in point of hosiery shipments and will show a substantial increase over 1940. Seamless hose output is stimulated by Government buying but full-fashioned is also setting records, he stated, due to the large volume of employment and greatly increased payrolls. The industry nevertheless is oversubscribing all Government invitations on hosiery at least two to one, he said, adding that delivery on Government contracts is on schedule and if its needs should rise considerably the industry will be able to supply this without serious effect upon civilian needs. Mr. Constantine pointed out that the experience of the past, however, indicates that retailers will do more anticipating in their buying policy to make certain of desired deliveries.

Defense Half-Hose Orders Stimulate Such Mills

The national defense drive has had very decided effects on hosiery demands and while shipments of most branches of the industry are up considerably compared with a year ago, the greatest gains have been registered in those lines that are part of the equipment of the military forces. In view of this wide gains have been registered in shipments of half-hose during the first five months of 1941 compared with the same period a year previous. In the half-hose business itself this type demand has been very apparent, particularly in the shipments of seamless wool socks which have been widely ordered by the Army. Shipments of this type merchandise during the first five months were 339 per cent above those for the same time in 1940. The influence of national defense on hosiery shipments was even more marked in May than any preceding month with an increase in wool half hose shipments of 592 per cent over May, 1940, according to the National Association of Hosiery Manufacturers.

Shipments of all types of hosiery showed a gain of 11 per cent in the first five months with women's full-fashioned goods registering an upturn of slightly more than 7 per cent. There were only three branches of the hosiery industry that failed to increase shipments during the first five months. Women's seamless registered a decline of 4.5 per cent; seamless silk half-hose dropped 8.6 per cent and men's full-fashioned half-hose shipments declined more than 19 per cent. This decline in such lines of half hose is a normal occurrence in view of the exceptionally large demands that are developing for military varieties of half hose. In other words, civilian type demand has been declining while very substantial gains have been and will continue to be registered in seamless wool and cotton half hose. Improved industrial conditions throughout the country have resulted in a wide gain of bundle goods which during the first five months of this year showed a 46 per cent gain over the same months of 1940.

Wage Committee Named For Knitted Outerwear

Appointment of an industry committee for the knitted outerwear industry scheduled to meet in Washington August 19 was announced by General Philip B. Fleming, administrator of the wage and hour division, Federal Department of Labor. Under provisions of the Fair Labor Standards Act the committee is instructed to recommend the highest minimum hourly wage up to 40 cents which would not substantially curtail employment. The industry is now operating under a 35 cents an hour minimum wage order resulting from recommendations of a previous industry committee. The definition of the knitted outerwear industry is identical with that used for the previous committee with the exception that it now includes specific reference to all bathing suits whether knitted or manufactured, including those from any purchased fabric, woven or knitted. G. Allan Dash, Jr., of the University of Pennsylvania was appointed chairman. Employer representatives are: Rudolph H. Wyner, of Shawmut Woolen Mills, Stoughton, Mass.; Ingram Bergman, of Bergman Knitting Mills, Philadelphia; Arthur J. Reinthal, of Bamberger-Reinthal Co., Cleveland; Irving J. Slotoroff, of Sinclair Knitting Mills, New York, and Edgar W. Stewart, Pacific Knitting Mills, Los Angeles.

Allotment Basis In Rayon Yarns

The rayon producing industry under no circumstances can supply the peak requirements of every customer and therefore the allotment plan becomes not only necessary but desirable, according to the Textile Economics Bureau in comparing rayon production and delivery statistics with the trend of demand of the various consuming trades. It was pointed out that the rayon industry has run its plants at capacity for some time, it is increasing its plant capacity somewhat and has reduced its available stocks of yarn to an absolute minimum in an effort to supply its regular customers. Defense needs for rayon undoubtedly will increase over the coming months so that it is predicted coming allotments of yarn probably will be reduced due in part to a somewhat lower production rate during July and August, plus the necessity of filling old order commitments. It was stated this clearly indicates that the rayon industry cannot supply the peak requirements of every customer every month, making the allotment plan imperative.

Union FF Manufacturers Want Uniform Contract

Full Fashioned Hosiery Manufacturers of America, Inc., operators of union shops, has gone on record as approving a uniform contract and of negotiating collectively through the association. A statement issued through Charles Lehmuth, executive secretary, said "It is a well known fact that this group of manufacturers has for many years been setting the standard for rates in the full fashioned industry." Negotiations for a new contract with the American Federation of Hosiery Workers for a new contract to succeed the present one that expires August 31, 1941, were scheduled to begin July 17 at Brigantine Beach, N. J. Under the old contract individual wage agreements were signed with various manufacturers in line with the attempt of the union to make it possible for full fashioned hosiery manufacturers in the North to compete to better advantage with southern knitters. This policy in recent years has developed a situation under which there is a difference in wage rates paid by various manufacturers. In view of the statement recently issued by the manufacturers' group it is apparent that it no longer wishes this but rather will hold out for uniform rates and working conditions among its members. At the annual convention early this year of the hosiery union it was voted to demand a 15 per cent wage increase.

Hose Union Agrees to Apex Damage Claim

Final settlement of the Apex Hosiery Co.'s suit against Branch 1, American Federation of Hosiery Workers was reached when the union made a down payment of $30,000 as the first installment of a total of $110,000 which it

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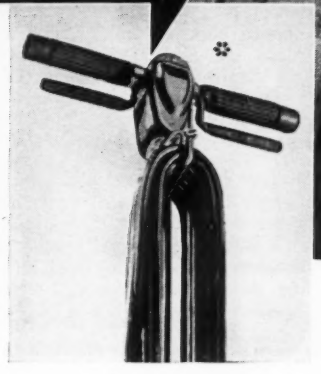

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will pay to the company over a 32-month period. The balance will be made in monthly installments of $2,500 each. The agreement was arrived at after almost a year's conferences and the sum to be paid by the union is full settlement for the $1,171,957 suit brought by the company for damages incurred during the sit-down strike in May 1937. The settlement sum is described as the largest amount paid in damages by an individual union in labor history. The agreement specifically provides that individual members of the union are not involved and will not be called upon to make any payment of money to the Apex company. The American Federation of Hosiery Workers, parent union, will be responsible for payments should the branch fail to make them.

More Raw Silk Shipped By Rail

While silk importers do not know to what use withdrawn ships on the Pacific Ocean runs between Japan and the United States may be put or how many more carriers may be diverted to other purposes, there is a feeling that as long as friendly relations between the two countries exist there will be ships plying between the West Coast and the Orient and that silk cargoes will continue to be attractive to those who control the shipping lines. The Raw Silk Importers, Inc., for more than a year anticipating a possible reduction of inter-ocean shipping facilities prevailed upon the trans-continental railroads to make a bid for the silk shipments through more inviting rates. The trans-Pacific and trans-continental carload rates add to $7.66 per hundredweight against a $6.50 all-water rate to New York. For the twelve months ended this June, 76 per cent of the raw silk was routed overland and 24 per cent through the Panama Canal.

36 Cent Seamless Minimum Effective September 15

A 36-cent minimum wage order for the seamless hosiery industry, effective September 15, was issued on July 21 by General Philip B. Fleming, administrator of the wage-and-hour division, U. S. Department of Labor. The 36-cent rate was recommended April 8 by a unanimous vote of the seamless hosiery industry committee. In making its recommendation to the Administrator, the committee suggested September 15 as the effective date.

The seamless hosiery industry, which employs around 62,000, has been operating since September 18, 1939, under a 32½ cents an hour minimum wage order. Of the 62,000 workers, approximately 27,500 are earning less than 36 cents an hour at the present time. About 76.5 per cent of the total value of the seamless hosiery output is produced in the South.

The previous wage order established a 40-cent an hour minimum for the manufacture of full-fashioned hosiery as well as a 32½ cent minimum for the manufacture of seamless hosiery. (The 40-cent minimum continues to be applicable to the production of full-fashioned hosiery.) This wage order provided that "an employee covered by (the 40-cent minimum wage and the 32½-cent minimum wage) shall be paid wages at a rate not less than 32½ cents an hour in any plant in which 50 per cent or more of the volume of hosiery produced is seamless hosiery if a reasonable employer could not by managerial methods limit the employee's work to the full-fashioned branch of the hosiery industry; otherwise such employee shall be paid wages at a rate not less than 40 cents an hour."

Gotham Hosiery Shows Darker Colors For Fall

Announcing its new fall colors, Gotham Silk Hosiery Co., emphasizes that for the first time in many seasons there is an entirely new trend in stocking colors. It states there is for one thing a swing to darker shades and also there is more variety in hosiery colors. It sees the revival of sheer black stockings this spring as having much to do with the new trend. Among the Gotham new darker shades for next season are an off-black, a dark brown to complement the fashion interest in brown costumes; a smoky taupe tone; a lively brown and a wine beige especially created for costumes in the red wine and vintage tones.

Wool Labeling Becomes Effective

Trade practice rules for the hosiery industry and the Wool Labeling Act, both setting up new requirements for the marking of hosiery shipped in commerce became effective July 15. Policing of the new measures is in the hands of the Federal Trade Commission, which it is expected will adopt a lenient policy at the start. Under both the trade practice rules and the wool labeling act distributors as well as manufacturers are responsible for the proper marking of merchandise. The labeling act broadly provides for the proper marking of wool merchandise but there is no attempt made to set forth any definite amount of wool that shall be used; rather it is the intent that what fiber is used shall be set forth on the tag or ticket so that the ultimate consumer can easily see what is in the goods or garment being purchased in the retail shop.

FORECAST

(Opinion submitted by COTTON's market correspondent)

Philadelphia, July 16, 1941

MOST BRANCHES of the textile industry have more orders for the next few months than they can deliver in the same period, meaning that many textile manufacturers are allotting their production rather than having to sell it. Under such conditions, which are becoming general in the entire business field, it would be expected that prices would surge upward and the inflation we have all talked for years, would soon be here. That wild inflation is not coming is definite. The Government has and will acquire additional laws to prevent such occurrence. There will be rises in commodities and textile products but no wild rise in prices because when the latter make their appearance Government price fixing will come in.

This has already been done in combed yarns and cotton goods and other ceilings in textiles are sure to come. This can mean only that the price structure later must be handled as an entirety so that this means shortly wages and commodities as well will be frozen. If wages are not this is such an item in costs that free business cannot long survive.

If we assume that price ceilings are going to become much more general and manufacturers will have all the business they can handle what are the prospects for the average textile manufacturer? These are for increasing costs such as taxes and great difficulty in getting raw materials unless the work is for national defense orders. Priorities are going to become the thing if a mill wishes to keep going full blast and orders are going to become so heavy under the national defense effort that civilian orders for textiles will have to take a back seat. It is possible to visualize manufacturers making some civilian lines that cannot turn to war orders becoming very dull with other manufacturers taking part in armament orders not being able to keep up with orders.

Under such conditions manufacturers should endeavor to keep much larger inventories of raw materials on hand and to place orders when their suppliers will accommodate them further ahead. There are enormous potentialities of inflation present in this country but as has been largely done in England, these forces will be harnessed to prevent any dangerous situation.

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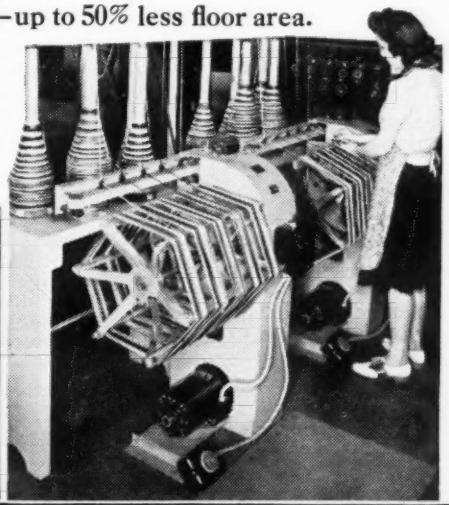

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TRENDS—YARN MARKETS

Ceiling In Combed Cotton Yarns Exerts Powerful Influence On Entire Market—Rayon Yarn Demand Much Larger Than Supply—Silk Strong But Advance Gradual—Worsted Yarns Being Allotted And Prices Creeping Upward—Interest In Far Ahead Yarn Shipments

Philadelphia, July 16, 1941

GOVERNMENT ACTION in setting a ceiling in combed cotton yarns late in May continues to be the most powerful influence in the sales yarn market. It has not only affected carded yarns where spinners are doing their best to keep prices in line with combed levels but it has exerted an influence in keeping advances in other type yarns such as worsted from skyrocketing too far. Advances have come in carded yarns over the last month and in instances they have come close to the combed ceiling for the same size although frequently the carded is above average quality. Aside from minor changes in rayon selling terms, prices of the man-made fiber have remained unchanged and this is keeping demand at peak levels. Yarn inventories are very low, so low that they are practically non-existant. Worsted yarns are saleable as far ahead as spinners will make offers but most are not selling beyond the end of the present year. Prices of these counts in instances are 7½ cents higher in the last month.

Cotton Yarns

Sharp advance in the price of raw cotton has been an outstanding development in the sales cotton yarn market over recent weeks, the upturn being almost three cents per pound in the last couple of months. While the price of combed yarns has been frozen by the Government ceiling so that such spinners could not keep abreast with their increase in costs, there has been a steady but gradual increase in the price of carded qualities. In instances carded has narrowed the margin between combed and the same count in carded. Commission yarn sellers report that spinners are not willing to sell much yarn even at the increased levels for carded; they state spinners have enough business in most instances so that it will be later before they open books for further ahead shipments.

Late in June Price Administrator Leon Henderson revised differentials on coarse count combed yarns taking into consideration complaints registered by the combed spinning trade that these were not in conformance with trade practices. The Government had set these in the May 23, 1941 list at one-half cent per pound for numbers from 24s and coarser while spinners [illegible]ued this differential should be a quarter of a cent per count. When the Government did make the revision it made a considerable difference in the price of such single and ply combed as 10s. The latter in single is now listed at 35½ cents while in the original combed list that was issued in May the same count was at 32 cents. At the latter figure spinners claimed they could not make money so the result was they did not make any offerings. At present combed spinners are not making offerings in large amounts in view of uncertainties that still exist.

One of the tight spots in the sales yarn field so far as nearby shipments are concerned is carded knitting where commission firms declare it is next to impossible to get offerings at any price. This is reflected in prices reported in carded knitting numbers and 30s single super carded at times has been sold slightly higher than the combed ceiling. In carded weaving spinners have been trying to keep differentials between their type yarn and the same size in combed at about three cents per pound. There have been sales of carded making the difference less but this has mainly been for special type yarns where the carded has a hard twist, for example, so that the price cannot be compared with soft twist in the Government combed ceiling. Spinners have made good progress in adjustments on old contracts due to the rise in the Government minimum wage level in the last month. These adjustments have been about half cent in coarse count knitting carded and slightly more for finer sizes.

Silk

Although mill takings of raw silk in the United States during June showed an appreciable increase over those for May and were considerably larger than those for June, 1940, they were offset by an increase in warehouse stocks. The size of the latter has eased some of the fears that had come about when several Japanese ships had been recalled to their home ports. It was felt this might reduce the amount of raw silk that could be imported and for a time brought about an increase in the price of silk but the market since has steadied around the $3.00 level. The price is about the same as it was a month ago and has been reflected in the action of most branded full-fashioned hosiery mills to keep prices for fall mainly unchanged at least to the end of July when the situation will come up again for consideration.

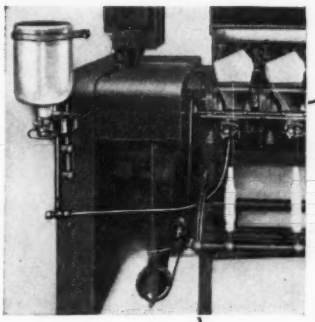
Mill takings of raw silk in the United States for June this year totaled 24,251 bales which was 1,811 bales ahead of the preceding month and about 40 per cent ahead of June of the preceding year. For the full year ended June 30, raw silk deliveries to mills in this country totaled 333,740 bales with total imports at 345,354 bales of which 290,395 bales were Japanese raws. Raw silk imports for June were 27,346 bales which was about 72 per cent larger than for the same month a year previous. Stocks in New York advanced, totaling 53,436 bales in June compared with 50,341 bales the month before or comparing with stocks a year previous of 41,822 bales. On the other hand stocks of silk in Japan, aside from the Government holdings to stabilize the market, are very small. In fact, free stocks of silk in Japan are down to an almost irreducible minimum.

Rayon

Of all the textile fibers, rayon is claimed to have the tightest supply situation at the present time and this notwithstanding that the Army and Navy do not buy nearly so much of the man-made fiber as they do wool and cotton lines. One factor that makes for the tighter domestic supply situation is that imports of rayon yarns are no longer coming in and it is not possible for the domestic producers to expand their production very easily nor quickly. At the same time there has been a very sharp increase in demand for products made from rayon yarns and this is apt to expand still further as the Government takes more and more of such lines as woolens. Shipments of rayon yarns for the first half of the present year totaled 220,000,000 pounds which was a new all-time record comparing with shipments of 186,000,000 for the first half of the preceding year or with 162,000,000 pounds for the same months in 1939. Rayon yarn stocks are almost non-existent.

Worsted Yarns

Due to the very tight delivery situation in worsted knitting yarns, which has become tighter during the month, prices have advanced. One count, 2-20s, 50s, Bradford in the oil, has advanced in this period from $1.52½ to around $1.60 with other numbers advancing almost this much. But the price is nominal in view of the lack of offerings with most spinners refusing to take further orders at present. They are concentrating on getting out current orders and will not open their books for additional poundage until later. In view of the continued advance in straight worsted prices there is more and more substitution going on with rayon of the staple variety being more generally used in the lower and medium priced goods brackets. Novelty yarns containing a part of rayon mixed with silk, cotton or mohair also are in wide use as a means of getting prompt yarn deliveries and cutting down yarn costs. Knitters are very active.



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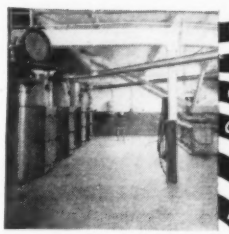
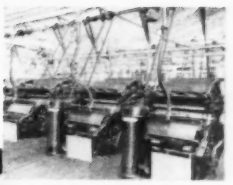
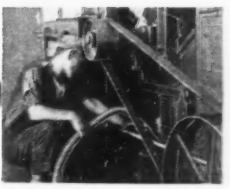
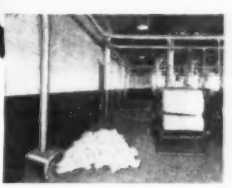


All strips and waste conveyed to central waste house.







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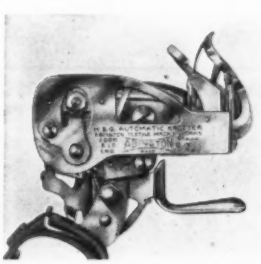

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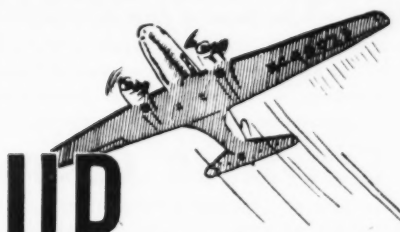

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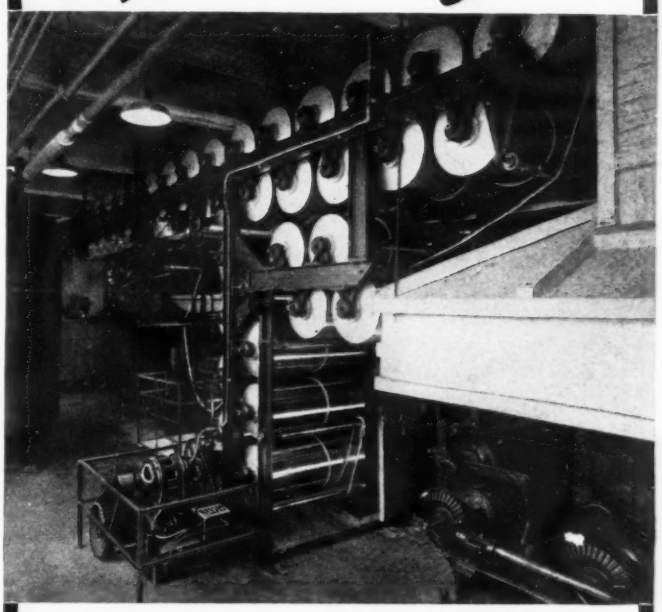

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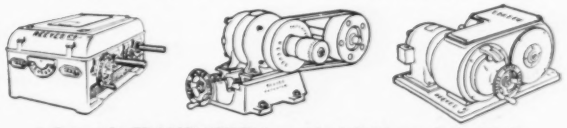

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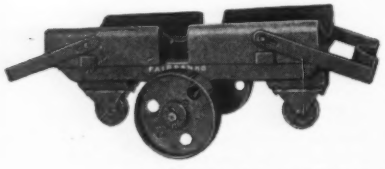

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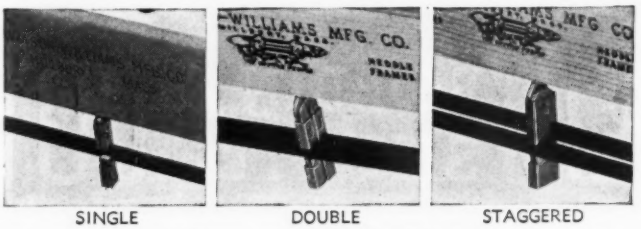

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. . . Proved in Scores of Textile Mills from Coast to Coast

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Write them . . . or write us direct—**Robbins Flooring Company, Rhinelander, Wisconsin**

MILLIONS WALK DAILY ON ROBBINS FLOORING

This is the Age OF SPEEDS and LONG DRAFT SPINNING

Ring Travelers of greater stability are necessary. Wentworth Double Duty, Wentworth Gravity and Gravity Express meet these requirements.

Duplex Twister Travelers — Berylian Finish Steel Travelers for Silk and Rayon

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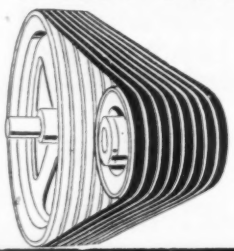
Everything You Need In

V-BELT DRIVES AND PULLEYS



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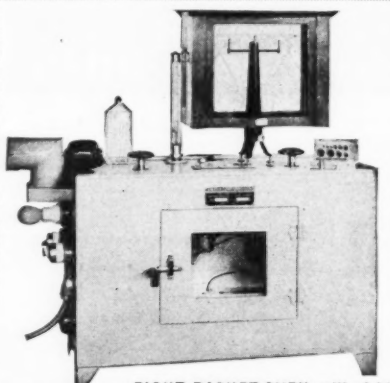

EIGHT-BASKET OVEN, with eight baskets 3" x 3" square and 6" deep or with six baskets 4¼" x 4¼" square and 6" deep. Sets on table.

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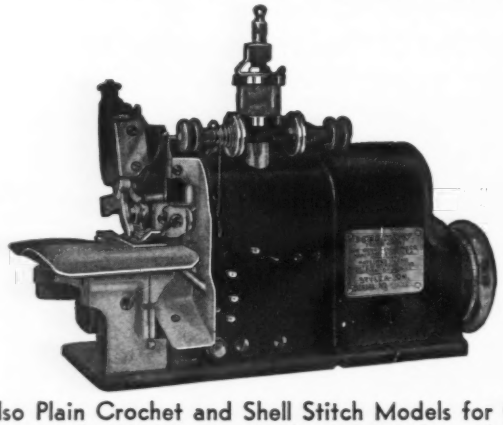

Also Plain Crochet and Shell Stitch Models for Ornamental Edge Finishing and Class 60 Machines for Butt Seaming.

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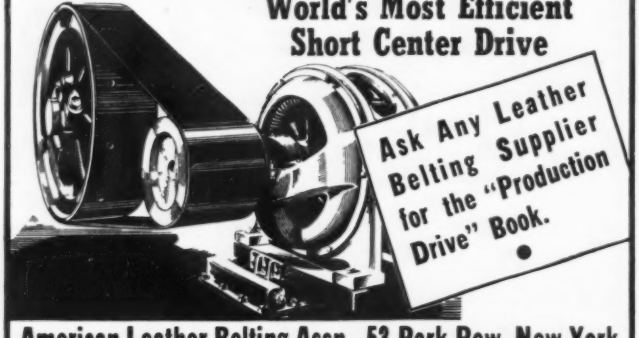
World's Most Efficient Short Center Drive



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LARGEST PRODUCERS *of* SIZES, SOFTENERS *and* GUMS

THANKS to the growing patronage of its many textile-mill customers, FRANK G. NORTH, INC., now is one of the largest, if not THE largest producer of warp sizes, softeners and gums in America.

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Why stuffing boxes are giving way to
JOHNSON ROTARY PRESSURE JOINTS

• At Delta Finishing Co., Philadelphia, Pa.—Johnson Joints installed on sanforizer.

• At Hope Webbing Co., Pawtucket, R. I.—Johnson Joint installed on a 7 ft. slasher.

• At Everlastik, Inc., Chelsea, Mass.—Johnson Joints installed on battery of dry cans.

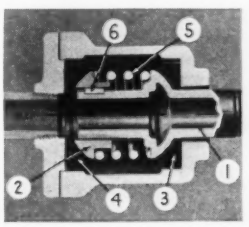
WHY are so many textile mills switching over to the Johnson Joint? For two sound reasons: 1st, it ends all stuffing box problems; 2nd, it helps to step up plant production.

HOW does it end all stuffing box troubles? By means of a simple, rugged construction that never needs to be oiled, has no packing at all to wear out, adjusts itself automatically to varying pressure, and absorbs both lateral and angular misalignment without loss of operating efficiency.

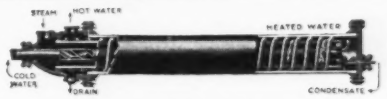
HOW does it step up plant production? Partly by eliminating many causes of machinery shutdown and thereby saving valuable production time. Mostly by making possible modern, more efficient methods of can drainage in which condensate is removed continuously, by means of a syphon pipe, through the same head that admits the steam. Machines can be started without delay—can temperatures can be higher and more uniformly maintained.

WHY don't you write for comprehensive new bulletin which shows a size and type of the Johnson Joint for every dry can, slasher or sanforizer.

NOTE THE SIMPLE, PACKLESS CONSTRUCTION



Nipple (1) is fastened to roll or drum. Collar (2) is keyed (6) to nipple but is free to slide back and forth. Carbon graphite seal ring (3) and bearing ring (4) eliminate packing and are completely self-lubricating. Spring (5) is for initial seating only; in operation joint is pressure sealed—adjusts itself automatically for most efficient operation.



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The best and simplest way to heat water with steam is with the Johnson "Instant" Water Heater. Hook it right up to your high pressure steam line—needs no reducers. Simple rugged design assures long life. Available in new low cost, all steel construction, or, for use where space is limited, in copper tube construction. Write for new bulletin.

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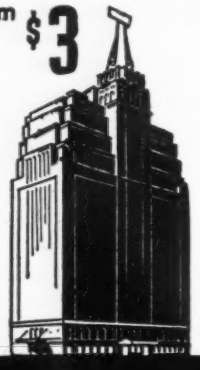

IN THE CENTER OF MID-TOWN NEW YORK

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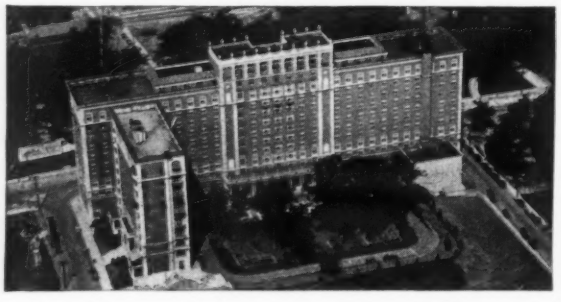

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The Keever Starch Company, Columbus, Ohio

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USAGE PROVES THAT

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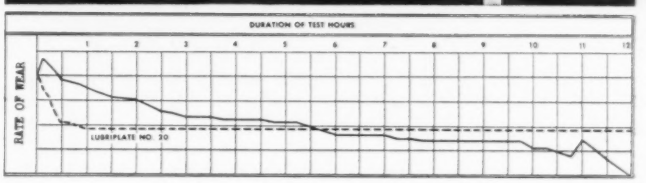
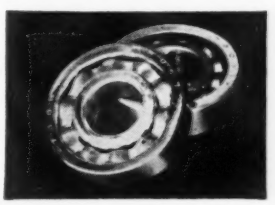
ARRESTS PROGRESSIVE WEAR



Broken line shows **LUBRIPLATE**. Solid line shows conventional lubricant.

This graph shows the results of lubrication tests made by the Pittsburgh Testing Laboratories. They definitely indicate that, when LUBRIPLATE starts to function, progressive wear stops. Full details of this test will be sent on request.

But more significant than laboratory tests are the performance *facts* of LUBRIPLATE throughout industry. Users find that LUBRIPLATE Lubricants reduce wear, reduce power consumption, reduce heat and noise. LUBRIPLATE has proven particularly successful under steam, wet and acid conditions.



Users of all types of bearings give amazing testimonials . . . "Bearing life trebled and more" . . . "Lubrication costs reduced 80%" . . . "Temperatures lowered 40 degrees F."

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Select the toughest lubrication problem in your plant. Request that a LUBRIPLATE field engineer call and recommend the proper type LUBRIPLATE for your purpose. Your comparison of results will be our bid for your business.

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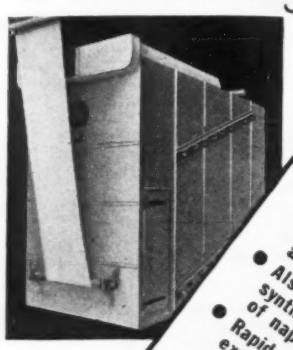
Dealers from Coast to Coast

LUBRIPLATE
ARRESTS PROGRESSIVE WEAR

PROCTOR
Roller Type DRYER



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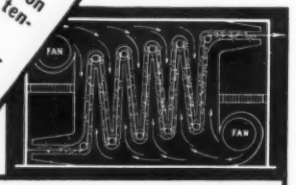
- Important all-around savings are realized.



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If interested, furnish full particulars as to education, experience, photograph, etc. All information in confidence. Address Box 544, care Cotton, Grant Bldg., Atlanta, Ga.

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Textile man experienced in cotton manufacturing, some staple rayon processing, familiar with various types of staple yarn machinery adjustment, for development and trouble shooting work. Position offers security and opportunity for advancement with expanding business. Write in own handwriting giving qualifications. Address Box 543, care COTTON, Grant Building, Atlanta, Ga.

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Paul B. Eaton, Former member Examining Corps U. S. Patent Office

POSITION WANTED

In North or South as Asst. Superintendent of cotton yarn or weaving mill. Experienced in carding and spinning on cotton and rayon blends of wool and rayon, silk and rayon noils. Twenty years experience, textile school graduate, American, married. Now employed but desires change. Address Box 536, care COTTON, Grant Building, Atlanta, Ga.

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Textile executive, eighteen years' experience cotton yarns, sheeting, sheets and pillow cases, contact man sales office, open for engagement. Successful record production and quality. Employee relations excellent. South preferred. Address Box No. 545, care COTTON, Grant Building, Atlanta, Ga.

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As Superintendent or Production Manager in medium sized mill. 44 years of age, experienced in all departments of cotton manufacture, textile education sufficient, past experience includes employment by the government in textiles. Now Asst. Superintendent. Can furnish references. Address Box 541, care COTTON, Grant Building, Atlanta, Georgia.

WANTED

Position as second hand in card room. Have completed I. C. S. course carding, spinning. Familiar with processing rayon staple fibre. Address Box 542, care COTTON, Grant Bldg., Atlanta, Ga.

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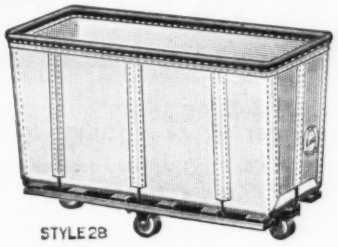
Position of Overseer or Asst. Overseer Carding by young married man not subject to draft. I. C. S. graduate. Experienced fixer, grinder, second hand. Can get results and get along with help. Reference. Address Box 539, care COTTON, Grant Bldg., Atlanta, Ga.



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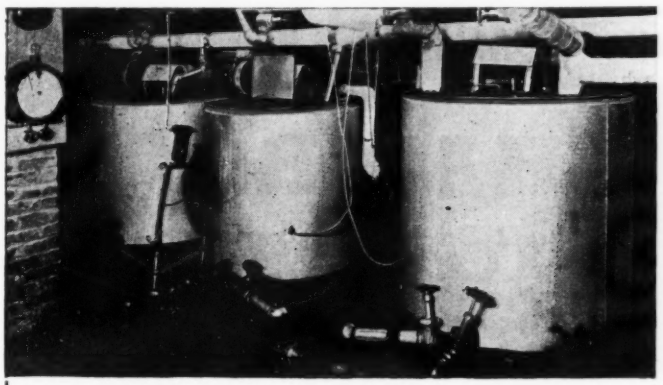

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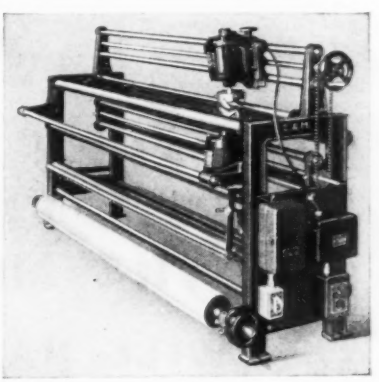

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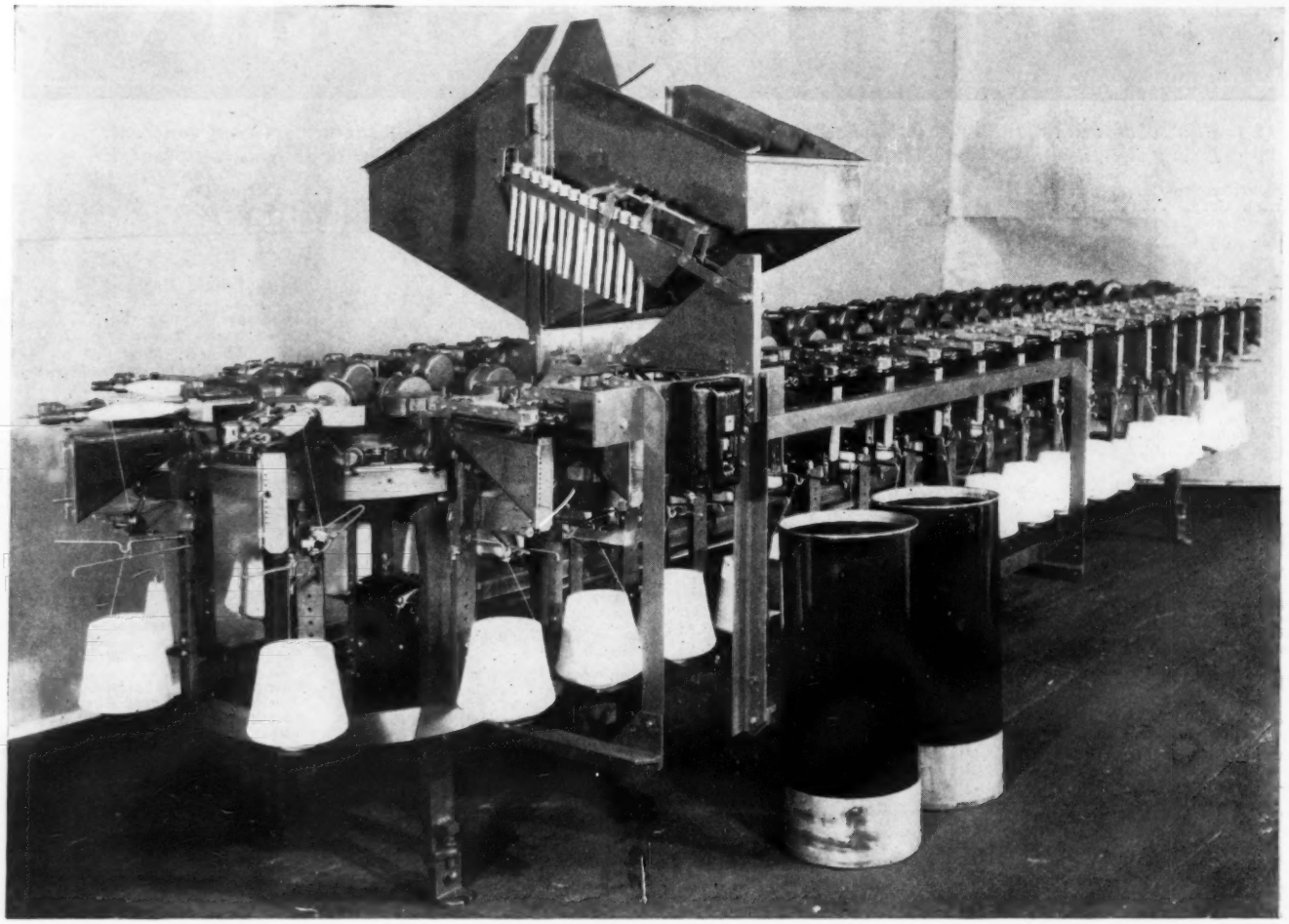

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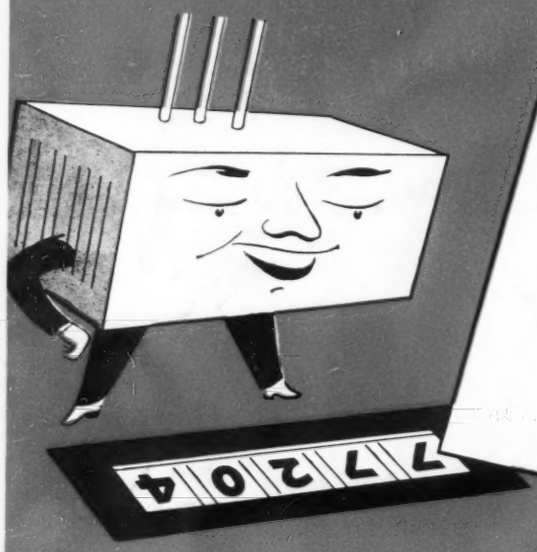

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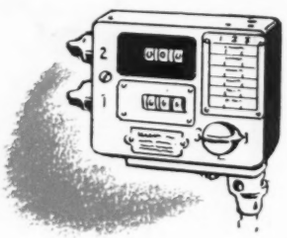

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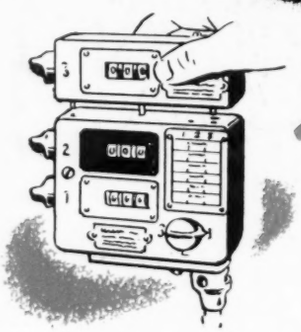

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